



UNION OF SOUTH AFRICA

# ANNUAL REPORT

OF THE

## Department of Public Health

Year ended 30th June, 1944

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*PUBLISHED BY AUTHORITY*

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# DEPARTMENT OF PUBLIC HEALTH.

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Typhus Fever.....



# DEPARTMENT OF PUBLIC HEALTH.

## Report for the Year ended 30th June, 1944.

THE HONOURABLE THE MINISTER  
OF WELFARE AND DEMOBILIZATION.

SIR,

I have the honour to submit, for your information, the following brief report on the work of the Department of Public Health for the year ended 30th June, 1944:—

### I.—INTRODUCTORY.

The strength of a chain lies in its weakest link. In the Union of South Africa the ill-health of the non-European section of the population constitutes an ever present menace to the general well-being.

It is not sufficiently realized that the European section is in reality the survival of the fittest during centuries of apprenticeship for civilization. Our ancestors suffered plagues and pestilences during this period of evolution. Their descendants have been blessed with a certain degree of immunity to many diseases. They have also developed the stamina to stand up to the demands made on them by modern standards of living. In other words, during the process of evolution they have acquired a constitution capable of standing up in fair degree to the stress and strain of present times. It is quite different with the non-European. It has been said that many of the diseases prevalent in the Union of South Africa are medieval, but there are literally millions of the non-European population who have not yet reached medieval standards of European civilization. It is true that certain sections of the Bantu population have attained to European standards but the Holism of Field-Marshal Smuts still holds, and until the mass of the Bantu population has sufficiently progressed, difficulties will exist in keeping the country free from epidemics.

Attention has often been drawn to the greatly increased mortality from tuberculosis in the non-European as compared with the European. It is interesting to compare the position in other countries where Europeans and people of African descent are living. In a report by the New York Tuberculosis and Health Association on Tuberculosis in America, an extract from which was published in the *British Medical Journal* of the 27th May, 1944, it is stated "The Coloured population of New York City had a mortality five times as high as the whole population; the rates for 1942 were 194 and 42 per 100,000 respectively". In the Union the proportion is somewhat similar.

An interesting article on syphilis in the United States of America, primarily a Negro problem, by W. G. Smellie was published in the *Journal of the American Medical Association* of the 5th June, 1943. Out of the first two million men, between 21 and 25 years of age, presenting themselves for military service, syphilis was *ten* times more prevalent in Negroes than in white persons. The incidence varied in different parts of America; where the rate for whites was highest, so also the rate for Negroes was highest; and the States where the Negro rate was lowest had also the lowest rate for whites. The Negro rates varied from 9 per cent. to 40 per cent., and the whites from 0.6 per cent. to 5.3 per cent.

In the report of the Medical Officer of Health, Kimberley, for the year ended 30th June, 1943, the results of an enquiry into the incidence of syphilis in Native labourers employed in Kimberley was published. The incidence of positive results in routine Wassermann and Kahn tests on Native labourers was 43 per cent. in one area and 30 per cent. in another. In the case of abattoir employees the incidence amounted to 32 per cent., and at antenatal clinics the proportion was 34 per cent in the case of Coloureds and 46 per cent. in the case of Natives. Similar figures were obtained at Brandfort, while in Pondoland, 12 per cent. of samples of the population had positive Wassermann reactions.

These figures are startling. It seems to be a popular belief that the remedy lies in the Public Health Department providing increased facilities for treatment. Yet it is apparent that large numbers of the population carry on a life of gross immorality unheeded and unchecked—a life which can only lead to physical, moral and spiritual degeneracy. That is the crux of the problem. Nevertheless facilities for the treatment of sufferers are being expanded wherever practicable by the Department and local authorities, while propaganda measures continue to be carried out.

There have been several outbreaks of formidable epidemic disease during the year, notably typhus and smallpox.

### TYPHUS.

It has been stated that the present epidemic was one of unprecedented magnitude. As a matter of fact there was a much more severe epidemic of typhus in the Union in 1935, and in 1920 an epidemic in which there were more than double the number of cases than in 1944. In 1921 the inhabitants of the old Ndabeni location in Cape Town were stricken in large numbers. In 1944 the epidemic was limited to the Transkei and Ciskei, with a few cases in other areas. In 1944, with the help of the Department of Defence, it was possible for the first time to carry out an anti-typhus campaign on such a scale that the outbreak was brought under control.

The methods used were the best at our disposal: Steam disinfection of clothes and blankets, inunction with naphthalene oil and prophylactic inoculation. Difficulties arose as Natives did not bring all their clothes and blankets, with the result that they became again verminous in a matter of forty-eight hours. The prophylactic vaccine against typhus is a fairly recent discovery and it is not yet known how long it will afford protection. Various authorities suggest "booster" doses or repeat doses of vaccine at intervals varying from three months to six months. At the request of the Department, a mobile laboratory

was sent into the Transkei by the South African Institute for Medical Research with a view to obtaining first-hand information about many of the problems which require to be solved.

An outbreak of typhus occurred in Naples in 1944, and a new method, or rather an old formula, came to light and a powder known as D.D.T. proved to be most effective in controlling the epidemic. The formula was secret and it was not possible to import any D.D.T.; so, after some difficulty, the formula was obtained and a small plant capable of producing 30 lb. of the powder per month was set up. Steps have now been taken to produce on a large scale and it is anticipated that 500 tons of pure D.D.T. will be produced in the Union in 1945. The powder has been tested out and is efficacious in 5 per cent. dilution against lice, bugs, and mosquitoes. It can be used either in powder form with Talc or dissolved in Kerosene.

The Department of Public Health, never adequately staffed, has lost the services of so many medical officers, either on active service or to other positions outside the Department, that it has had to carry on with less than half the normal complement, while the demands for help from the public have increased out of all proportion. The Department of Defence, especially the sections under Brigadier Orenstein, Director-General of Medical Services, and General Mitchell Baker, Quartermaster-General, has responded immediately to every call for assistance in providing personnel, vehicles and equipment which, otherwise, were quite unobtainable.

Typhus has been endemic in the Transkei for probably at least fifty years, but it has never been tackled in so thorough a manner before. The campaign will continue and, with new discoveries such as D.D.T. powder to help, the Department will not rest until the menace of typhus is entirely eradicated.

### SMALLPOX.

A particularly virulent form of smallpox broke out in Natal. For years smallpox in a mild form has been endemic, but the present outbreak is much more virulent, in fact it is indistinguishable from the Asiatic type. Vaccination against smallpox is compulsory in the Union, but large numbers of the population have avoided being vaccinated. Amongst non-Europeans, cases are hidden and so act as foci. Probably due to the fact that many people have more money than formerly there is much more movement of people from place to place, which increases the risk of spread of infectious diseases.

The Department's powers and functions are circumscribed by the provisions of the Public Health Act, No. 36 of 1919, as amended. However much the Act constituted an advance upon the legislation which it replaced at the time of its enactment, it has become more and more clear that it has failed to keep pace with modern requirements and lagged behind the popular conception of the rôle which should be played by a Union Department of State in regard to the public health. It was a realisation of the limitations imposed upon the Department by the Act and their effect upon the health of the nation that led to the appointment of the National Health Services Commission whose report is now under consideration by the Government.

During the year under review the Department's experiences in endeavouring to combat the epidemics of typhus and smallpox respectively have made it obvious that, if the public health is to be adequately safeguarded, the Department's powers and functions should, in many respects be executive rather than mainly advisory. In fact the Department felt impelled, in the national interest, to place a liberal interpretation upon the provisions of section *three* of the Public Health Act in order to deal effectively with the epidemic of typhus fever in certain affected areas.

### DEATH RATES.

Figures are available only up to 31st December, 1943, and for Europeans.

The crude death rate for 1943 was 9.53 per 1,000, which is higher than for the past few years. In 1937 the rate was 10.08 per thousand.

### SPECIFIC CAUSES OF DEATH.

There was a rise in the deaths from diseases of the heart and circulatory system. The figure for 1943 being 211.92 per 100,000. Thus 22.3 per cent. of all deaths in Europeans in 1943 were due to diseases of the heart and circulatory system.

In 1921 the crude death rate was 10.41 per 1,000. The death rate for diseases of the heart and circulatory system 1.03 per 1,000, i.e., 9.9 per cent. of deaths from all causes. The next most common cause of deaths is cancer. The rate for 1943 being 109.08 per 100,000 of the European population, so that 11.5 per cent. of all deaths were due to cancer in that year; in 1921 the percentage was 6.8 per cent. of the total deaths. In 1943 in one out of every three deaths among Europeans, the cause of death was either disease of the heart and circulatory system or cancer. In 1921 in one out of every *six* deaths the cause of death was either of these two diseases.

The next most common cause of death was pneumonia and bronchitis. There was a rise in the death rate in 1943, the rate being 92.23 per 100,000, the highest since 1939, when the rate was 90.05 per 100,000.

In the case of tuberculosis the death rate in Europeans again showed a distinct fall—the rate for 1943 being 33.16 per 100,000, the lowest on record. The death rate in 1921 was 58.26 per 100,000.

Deaths from miners' phthisis combined with tuberculosis are included. It has been suggested that the fall in the tuberculosis death rate is attributable to a decline in the number of cases of miners' phthisis. In the table giving a summary of vital statistics of the European population, the death-rate from tuberculosis in each province and in



males and females is set out. It was not possible to get full details prior to 1923. A comparison of the years 1923 and 1943 is set out as follows:—

The rates are per 100,000.

	Cape.		Transvaal.		O.F.S.		Natal.	
	M.	F.	M.	F.	M.	F.	M.	F.
1923.....	55.03	52.43	74.45	21.12	19.91	17.17	41.62	40.45
1943.....	51.67	45.11	36.52	10.25	12.00	13.13	46.90	26.32

The only rate which has risen is for males in Natal. All other rates have fallen. The rate for European males in the Transvaal was half in 1943 what it was in 1923, but so was the rate for females. The rate in the Cape Province was highest for both males and females, but increased accommodation is being provided as rapidly as possible.

Another interesting figure is that for infantile mortality. The rate for 1943 was lower than any of the previous years included in the table, being 47.31 per 1,000 live births registered. In 1920 the rate was 90.07 per 1,000 live births. There has been a slight rise in the maternal mortality rate, which is 2.85—the lowest rate was in 1941 when the figure was 2.49. The highest rate in the past twenty-four years was in 1934, when the rate was 5.99.

It is reasonable to assume that better nursing facilities are to a large extent responsible for this progress. The Public Health Amendment Act, No. 57 of 1935, made legal provision for subsidisation of district nursing services. This Act came into force on the 1st July, 1935, and by the 31st December, 1935, forty-seven district nurses had been appointed. On the 30th June, 1944, there were 533 district nurses employed.

The increased scope for the employment of nurses is partially responsible for the acute shortage of nurses in the Union. There are 240 beds for tuberculosics vacant because no nurses are available, while in General Hospitals and Nursing Homes great difficulties are being experienced owing to lack of nursing staff.

The shortage of trained nurses in the Union formed the subject of a conference between representatives of the Provincial Administrations, the Directorate-General of Medical Services and this Department in Pretoria in November, 1943. The recommendations of the conference aimed at instituting various measures designed to increase the supply of trained nurses and make the profession more attractive, and so overtake the prevailing shortage, and were endorsed by the Provincial consultative Committee at the meeting held in Cape Town in January, 1944. These recommendations are now receiving the attention of the Government.

In August, 1943, the Department became responsible for mental

health as well as physical health with the transfer to it of the Mental Hygiene Section of the Department of the Interior, involving the administration of the Mental Disorders Act, 1916, and the maintenance of mental hospitals and the like. The authorised establishment of the Department has thus increased from 947 Europeans (including 361 part-time) and 661 non-Europeans to 3,072 Europeans and 1,671 non-Europeans, while the estimates of expenditure, although accounted for separately may be said to have increased from £1,286,500 to £2,236,500 in respect of the current financial year. Unfortunately the prevailing shortage of nurses in the Union has had repercussions in the mental hospital services as much as in other fields and it has been necessary to resort to the employment of a large proportion of untrained personnel in order to ensure the continued functioning of several of the institutions.

## II.—VITAL STATISTICS.

At the 31st December, 1943, that is, the middle of the report year, the Census Department estimated the total population of the Union to be 10,788,500 of which 2,265,000 were Europeans. The non-European population was made up of 7,503,900 Bantu, 245,600 Asiatics, and 874,000 Coloureds.

Table 1 summarizes the principal vital statistics for Europeans for the calendar year 1943. Tables 2 and 3 are interesting from the point of view of international comparisons.

For the first time the death rate for tuberculosis is shown for each province and for males and females separately, as well as for the population of the Union as a whole. This is more fully discussed in the appropriate section of the report but attention must be drawn here to the fact that the death rate for the country as a whole is the lowest ever recorded. The improvement in the maternal mortality rate was maintained and the infantile mortality rate showed a further improvement, the figure again being the lowest ever recorded for the Union.

The death rate from diseases of the heart and circulatory system shows a definite increase, while the cancer death rate shows another slight rise. As indicated in previous reports, both these groups of diseases are principally associated with middle or later life and, with our present knowledge, are not preventable to anything like the same degree as the diseases which cause death at an earlier age. It is therefore inevitable that as environmental conditions which may give rise to disease are controlled to an increasing degree in any community, the death rates from the diseases of late and middle life will increase.

The crude death rate has varied very little during the last few years while the birth rate and the rate of natural increase are slightly higher than any recorded since 1930. As will be seen from table 2, the rate of natural increase in South Africa is considerably higher than in most other civilized countries for which figures are available.

TABLE 1.—UNION OF SOUTH AFRICA: SUMMARY OF VITAL STATISTICS OF EUROPEAN POPULATION, 1920-1943.

Calendar Year.	European Population (estimated).	Birth Rate per 1,000 of Population.	Death Rate per 1,000 of Population.		Diseases of Heart and Circulatory System.	Pneumonia and Bronchitis.	Cancer.	Death Rate per 100,000 of Population from Tuberculosis (all forms).§								Percentage of Total Deaths, the Cause of which was Medically Certified.	Infantile Mortality Rate (Deaths of Infants under One Year per 1,000 Live Births Registered).	Maternal Mortality Rate (Deaths of Mothers in connection with Pregnancy or Childbirth Per 1,000 Live Births Registered).	Survival Rate or Rate of Natural Increase of Births over Deaths per 1,000 of Population).					
			Actual or Crude.	Standardized.*				Cape Province.				Transvaal.								Orange Free State.				Total.
								Cape Province.		Transvaal.		Orange Free State.		Total.										
								Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.									
1920.....	1,499,911	28.97	11.09	12.15	95.67†	113.87†	58.87†	52.43	74.45	21.12	19.91	17.17	41.62	45.93†	79.78	90.07	4.10†	17.88						
1921.....	1,519,488†	28.44	10.41	11.43	102.91	136.15	69.09	82.82	84.54	23.41	14.71	22.25	50.93	58.26	80.76	77.09	4.94	18.03						
1922.....	1,556,241	27.52	9.48	10.41	97.99	127.24	70.88	67.04	81.54	23.41	14.71	22.25	50.93	47.74	82.96	72.91	5.21	18.04						
1923.....	1,579,733	26.70	9.77	10.65	108.50	120.72	78.94	65.65	84.54	23.41	14.71	22.25	50.93	46.46	82.77	74.42	5.22	16.93						
1924.....	1,610,774	26.29	9.62	10.44	123.92	123.79	76.36	62.14	84.54	23.41	14.71	22.25	50.93	51.59	84.74	73.73	4.75	16.67						
1925.....	1,637,472	26.51	9.39	10.15	128.86	97.04	72.86	57.36	84.54	23.41	14.71	22.25	50.93	52.70	86.45	68.39	5.62	17.12						
1926.....	1,676,660†	26.16	9.59	10.28	127.21	113.44	71.18	59.87	84.54	23.41	14.71	22.25	50.93	53.41	87.76	64.82	4.56	16.57						
1927.....	1,708,955	25.95	9.73	10.34	122.76	110.42	73.20	61.36	84.54	23.41	14.71	22.25	50.93	50.50	89.93	70.62	4.80	16.22						
1928.....	1,738,937	25.77	10.15	10.69	133.53	127.52	77.72	56.51	84.54	23.41	14.71	22.25	50.93	50.95	89.93	70.49	4.98	15.62						
1929.....	1,767,719	26.15	9.51	9.98	127.11	104.04	77.44	51.63	84.54	23.41	14.71	22.25	50.93	45.37	90.19	64.22	5.26	16.64						
1930.....	1,797,900	26.44	9.69	10.08	132.33	112.87	82.62	50.58	84.54	23.41	14.71	22.25	50.93	46.78	91.15	66.84	5.26	16.75						
1931.....	1,829,300	25.38	9.37	9.56	131.53	103.75	85.55	55.79	84.54	23.41	14.71	22.25	50.93	44.22	90.46	63.07	4.70	16.01						
1932.....	1,859,400	24.17	9.97	9.98	137.52	113.75	89.06	54.55	84.54	23.41	14.71	22.25	50.93	42.33	90.84	68.57	5.31	14.20						
1933.....	1,890,300	23.55	9.35	9.27	142.52	100.30	95.33	57.48	84.54	23.41	14.71	22.25	50.93	40.68	91.45	61.01	4.81	14.20						
1934.....	1,914,700	23.44	9.68	9.55	156.21	94.53	92.39	50.23	84.54	23.41	14.71	22.25	50.93	39.54	91.91	60.79	5.99	13.76						
1935.....	1,973,700	24.18	10.45	10.28	169.53	131.98	95.76	50.85	84.54	23.41	14.71	22.25	50.93	40.43	92.55	62.81	4.73	13.72						
1936.....	2,008,700	24.21	9.57	9.50	154.38	106.19	97.28	46.61	84.54	23.41	14.71	22.25	50.93	34.40	92.88	59.06	5.10	14.64						
1937.....	2,043,700	24.90	10.08	9.66	172.97	113.62	106.57	47.19	84.54	23.41	14.71	22.25	50.93	36.40	93.17	56.57	4.38	14.81						
1938.....	2,081,400	25.01	9.48	8.93	153.55	102.53	103.44	51.75	84.54	23.41	14.71	22.25	50.93	38.34	94.20	51.69	3.69	15.53						
1939.....	2,116,500	25.29	9.40	8.75	170.42	90.05	104.75	54.44	84.54	23.41	14.71	22.25	50.93	36.19	94.32	49.48	3.61	15.88						
1940.....	2,152,700	25.29	9.42	8.65	190.18	89.93	102.80	52.03	84.54	23.41	14.71	22.25	50.93	35.12	94.75	50.02	3.37	15.87						
1941.....	2,188,200	24.94	9.47		197.61	86.14	109.40	43.83	84.54	23.41	14.71	22.25	50.93	34.26	94.95	50.93	2.49	15.47						
1942.....	2,230,000	25.18	9.35		199.69	81.97	109.33	44.95	84.54	23.41	14.71	22.25	50.93	33.19	94.83	47.52	2.83	15.83						
1943.....	2,265,000	25.94	9.53		211.92	92.23	109.98	45.11	84.54	23.41	14.71	22.25	50.93	33.16	95.25	45.60	2.85	16.41						

\* The rate which would have obtained had the age and sex distribution of the population been the same as that of England and Wales at the 1901 Census, the standard usually taken for international comparisons.

† Medically certified deaths only. Rates for subsequent years calculated on the total deaths registered.

‡ Actual (per census).

§ Includes miners' phthisis combined with pulmonary tuberculosis.

|| Not yet available.

¶ Not available.



TABLE 2.—COMPARISON OF BIRTH, DEATH AND NATURAL INCREASE RATES AMONG EUROPEANS IN THE UNION WITH OTHER COUNTRIES. AVERAGE RATES FOR THREE-YEARLY PERIODS (BASED ON LATEST AVAILABLE INFORMATION).

Countries.	Birth-rate.	Death-rate.	Natural Increase.
Union of South Africa.....	25.9	9.5	16.4
Holland.....	20.7	9.0	11.7
Canada.....	22.4	9.8	12.6
Portugal.....	26.1	15.6	10.5
New Zealand.....	20.9	9.4	11.5
Italy.....	23.5	13.7	9.8
Australia.....	18.3	10.0	8.3
Germany.....	20.0	12.2	7.8
United States of America.....	16.9	10.5	6.4
England and Wales.....	14.9	12.7	2.2
France.....	14.7	15.7	*

\* Decrease.

TABLE 3.—INFANTILE MORTALITY RATES : EUROPEANS IN THE UNION COMPARED WITH OTHER COUNTRIES. AVERAGE RATES FOR THREE-YEARLY PERIODS (BASED ON LATEST AVAILABLE INFORMATION).

New Zealand.....	32
Holland.....	36
Australia.....	39
Union of South Africa.....	48
England and Wales.....	53
Canada.....	57
Germany.....	61
France.....	73
Belgium.....	78
Italy.....	102
Lithuania.....	118
Portugal.....	128

III. ADMINISTRATIVE.

1. STAFF.

The staff chart (Table 4) included in this section shows the departmental organisation. During the year under review, Mr. A. Stuart, who since shortly after his retirement in 1941 had been Acting Under-Secretary, was transferred to the Central Housing Board as Deputy Chairman. Mr. C. van Niekerk, Senior Public Service Inspector, was appointed Under-Secretary.

The Department has lost several of its senior professional staff during the year. Dr. Gale, who had been seconded to the staff of the Workmen's Compensation Commissioner some time previously, was permanently transferred to that department. Dr. Daneel, who had been superintendent of Rietfontein Hospital for many years, retired and was replaced by Dr. Loots from head office. It is with deep regret that the death of Dr. Batchelor, for many years the Port Health Officer of Durban, must be recorded. Dr. Finlayson of the Biological Control Laboratory, who had been on military service for some time, resigned from the Department to set up a private laboratory.

The replacement of senior professional officers by experienced personnel is almost impossible under present conditions with the result that the work of the Department has been carried on under very difficult circumstances. Great difficulty is still being experienced in obtaining suitable substitutes for other officials who are on military service.

TABLE 4.

## CHART OF DEPARTMENT OF PUBLIC HEALTH, AS AT 30TH JUNE, 1944.

Minister of Welfare and Demobilization (HON. H. G. LAWRENCE).

Minister (Chairman)  
 Secretary and Chief Health Officer (Deputy Chairman)  
 Director of Veterinary Services  
 Mrs. J. E. Conradie  
 Senator W. J. O'Brien and Mr. R. H. Buchanan  
 Drs. K. Bremer, M.P., A. J. Orenstein, C. P. Theron, and E. H. Cluver

} Council of Public Health.

Secretary and Chief Health Officer (Dr. Peter Allan).

Deputy Chief Health Officer  
(Dr. A. J. van der Spuy).Under-Secretary (C. van Nickerk).  
Departmental Chief Clerk (N. A. G. Reeler).Commissioner for Mental Hygiene  
(Dr. W. Russell).1 Accountant.  
1 Assistant Accountant.

2 Chief Clerks, Grade II.

7 Principal Clerks.

20 Senior Clerks.  
1,199 Clerks, Typists, etc.

## SECTIONS.

Detached Officers.	Inspection and Special Staff.	Maternity and Child Welfare.	Pathological and Biological Control Laboratories.	Port Health Officers.	District Surgeons.	Leprosy.	Venereal Diseases.
Cape Town:— Deputy Chief Health Officer (Dr. H. S. Gear). Assistant Health Officer (Dr. J. J. du Pré le Roux). Durban:— Deputy Chief Health Officer (Dr. F. W. P. Cluver). Assistant Health Officer (Dr. A. L. Ferguson). Johannesburg:— Senior Assistant Health Officer (Dr. B. M. Clark). S.A. Railways and Harbours:— Deputy Chief Health Officer (Dr. C. G. Booker).	Assistant Health Officer (Dr. P. C. Eagle). Assistant Health Officer, (Venereal Diseases) (Dr. N. L. Murray). Medical Inspector (Vacant). Dental Health Officer (Dr. T. Ockerse). Nutrition Officer (Dr. J. M. Latsky). Medical Inspector, Cape Native Territories (Dr. R. J. Smit). Medical Officers, Native Health Units (Drs. S. L. Kark and E. C. A. Fristedt). Senior Dietitian (Miss G. M. Sedgwick). Two Dietitians. Ecologist & Chief Rodent Officer (Mr. D. H. S. Davis). Fifteen Inspectors (plague and typhus).	Medical Inspector (Dr. K. D. Winterton). 3 Nurse Lecturers.	Cape Town, and Vaccine Institute, Rosebank (Drs. W. F. Rhodes, I. Gordon, and A. H. Shapiro). Cape Town Biological Control Laboratory (Dr. R. Turner). Durban (Dr. B. Sampson). S.A. Institute for Medical Research Johannesburg, Port Elizabeth, and Bloemfontein). East London and Border Pathological Laboratory.	Cape Town (Dr. J. M. Bosman). Durban (Dr. J. McKay). Port Elizabeth (Dr. H. W. A. Kay). East London (Dr. R. V. S. Stevenson). Simonstown (Dr. A. B. Bull). Knysna (Vacant). Mossel Bay (Dr. J. J. v. Reenen). Port St. Johns (Dr. G. H. Meiring). Saldanha Bay (Dr. J. Rauch).	31 Whole-time. 2 Whole-time (jointly). 348 Part-time. 381 Total.	<i>Leprosy Advisory Committee.</i> Secretary and Chief Health Officer, Dr. P. Allan (Chairman), Professor W. H. Craib, Drs. A. Pijper, A. J. Orenstein, W. F. Rhodes, E. H. Cluver, and K. Bremer, M.P. <i>Institutions.</i> Pretoria (Drs. A. R. Davison, H. J. F. Wood, and P. A. D. Winter). Emjanyana (F. J. Roach and Dr. P. A. Thornton). Mkambati (J. P. J. Kolver and Dr. F. S. Drewe). Amatikulu (E. G. C. Scotney and Dr. E. L. Riemer). Bochem (J. H. Franz).	<i>Venereal Diseases Advisory Committee.</i> Secretary and Chief Health Officer, Dr. P. Allan (Chairman), Dr. H. Gluckman, M.P., and departmental medical officers. <i>Institutions.</i> Rietfontein, Johannesburg (Drs. J. H. Loots, J. Meyer, and N. Saks). Kingwilliamstown. Bochem (a). Elim (a). Jane Furse Memorial (a). Several smaller hospitals.

Malaria.	Tuberculosis.	Epidemic and Infectious Diseases (Plague, Typhus, Smallpox, etc.), and Vaccination.	Food and Drugs Adulteration, Habit-forming Drugs.	Local Authorities.	Mental Hospitals.	Other Bodies.
Transvaal: Senior Malaria Officer (Dr. S. Anneck), Inspectors and Assistants. Natal: Medical Inspector (Dr. C. A. M. Murray), Inspectors.	<i>Institutions.</i> Nelspoort Sanatorium (Drs. H. R. Aekermann, P. Scher, and C. A. Sleggs). Rietfontein Hospital. King George V Hospital (Drs. B. A. Dormer, J. Friedlander, and F. J. Wiles). In addition to these institutions under the direct control of the Department, there is a number of other hospitals where accommodation is available.	Field Staff. District Surgeons. Local Authorities. Magistrates, etc.	Inspectors, Customs, Police, etc. Chemical work done in chemical laboratories of Department of Agriculture at Cape Town and Johannesburg. Pharmacist.	252 City and Town Councils. 92 Village Management Boards. 22 Local Boards. 30 Village Councils. 67 Health Committees. 23 Town Boards. 95 Divisional Councils. 1 Health Board. 154 Magistrates. 5 Mining Commissioners. 1 Rural Local Authority. 1 Local Health Commission. 743 Total.	19 Physician Superintendents. 1 Psychologist. 6 Chemists and Drug-gists. <i>Institutions.</i> Alexandra: Feeble-minded. Bloemfontein: Mental. Fort Beaufort: Mental. Fort Napier: Feeble-minded. Grahamstown: Mental. Pietermaritzburg (Town Hill): Mental. Port Alfred: Mental. Pretoria: Mental. Queenstown: Mental. Valkenberg: Mental. Witrand: Feeble-minded. Krugersdorp: Mental.	Central Housing Board, Chairman, Sir E. N. Thornton; Members, Messrs. A. Stuart, F. W. Jameson, J. S. Cicland, G. R. Savage, T. J. Canty (Assessor Member). J. Combrink (Secretary). South African Medical Council. South African Pharmacy Board. Rand Water Board. National Nutrition Council.

(a) Receives grant-in-aid.



## 2. DISTRICT SURGEONCY SYSTEM.

As indicated in previous annual reports the district surgeons, like other medical practitioners, are working under the strain of war conditions and the resulting shortage of medical men. They have, however, continued to render valuable service. Owing to the shortage of doctors it is still very difficult and sometimes impossible to fill district surgeoncies which fall vacant. All such appointments as are made are of a temporary nature for the duration of the war. The position in regard to the personnel engaged is summarized in the following table:—

TABLE 5.—DISTRICT SURGEONCIES AND ADDITIONAL DISTRICT SURGEONCIES AS AT 30TH JUNE, 1944.

Province.	Whole-time.	Whole-time, but Jointly with Local Authority or Public Body.	Part-time.			Total.
			On Inclusive Annual Salary.		On Annual Salary with certain Supplementary Fees and Allowances.	
			District Surgeons.	Additional District Surgeons.		
Cape.....	8	2	—	31	135	176
Natal.....	3	—	—	2	43	48
Transvaal.....	18	—	1	22	53	94
Orange Free State.....	2	—	—	15	46	63
UNION....	31	2	1	70	277	381

The thirty-one whole-time posts are those at Cape Town (2); Durban (3); East London; Port Elizabeth; Pretoria (4) (one at Bronkhorstspuit); Johannesburg (4); Pietersburg (2); Bloemfontein (2); Wynberg; Knysna; Heidelberg (Tvl.); Nigel; Vereeniging; Nylstroom (2); Rustenburg (2); De Lagersdrift (District Middelburg, Tvl.); Saldanha Bay; and Kimberley.

3. TABLE 6.—LOCAL AUTHORITIES UNDER THE PUBLIC HEALTH ACT (1919) AS AT 30TH JUNE, 1944.

Province.	City and Town Councils.	Village Management Boards.	Local Boards.	Village Councils.	Health Committees.	Town Boards.	Magistrates.	Divisional Councils.	Board of Health.	Mining Commissioners.	Rural Local Authority.	Local Health Commission.	Total.
Cape.....	139	87	22	—	—	—	29	95	1	1	1*	—	375
Natal.....	11	—	—	—	31	23	46	—	—	—	—	1	112
Orange Free State.....	64	5	—	—	—	—	36	—	—	1	—	—	106
Transvaal...	38	—	—	30	36	—	43	—	—	3	—	—	150
TOTAL....	252	92	22	30	67	23	154	95	1	5	1	1	743

\* Vaal-Hartz Rural Local Authority with area of jurisdiction extending into the Transvaal.

## IV.—WORK OF THE DEPARTMENT.

### 1. INSPECTIONS, INVESTIGATIONS, AND FIELD WORK.

The field work of the Department, like all other departmental activities, has had to be carried on under the difficult conditions of staff shortage caused by the war. Although the staff of the Department has been seriously depleted, professional officers are always available to give advice and assistance to local authorities in connection with the prevention and control of infectious disease and other important public health matters.

### 2. PUBLICATIONS.

DR. S. ANNECKE, Senior Malaria Officer, Tzaneen:

"Repellants in Malaria Control", published in the *S.A. Medical Journal*, Vol. XVII, No. 24 (December, 1943).

DR. J. DANEEL, Medical Superintendent, Rietfontein Hospital Johannesburg (with Dr. J. Meyer):

"A Case of Abortus Fever", published in *The Lancet*, Vol. XV, No. 1, dated May, 1944.

DR. B. A. DORMER, Medical Superintendent, King George V Jubilee Hospital for Tuberculosis:

"A Note on Jigger Flea (*Tunga Penetrans*) Infestation in Man" (with Drs. J. Friedlander and F. J. Wiles), published in the *South African Medical Journal* (December, 1943), Vol. XVII, No. 24, 382.

"Tuberculin Patch Test—a comparison with the Mantoux Intracutaneous Test" (with Drs. J. Friedlander and F. J. Wiles, and Capt. R. Schaffer), published in the *American Review of Tuberculosis* (November, 1943), XLVIII, 5,325.

"A South African Team Looks at Tuberculosis" (with Drs. J. Friedlander and F. J. Wiles), published in the Proceedings of the Transvaal Mine Medical Officers' Association (November 1943), XXIII, 257.

DR. J. M. LATSKY, Nutrition Officer, Pretoria:

"National Efficiency, Food and War", published in *Physical Education*, Vol. V, No. 3, page 13 (September, 1943).

"But Seek Ye (therefore) First . . .", published in *Physical Education*, Vol. VI, No. 2, page 2 (June, 1944).

"A Design to Keep the Peace", published in *Physical Education*, Vol. VI, No. 2, page 5 (June, 1944).

"The Recognition of Human Malnutrition" (with Professor J. F. Brock), published in the *South African Journal of Science* No. 40, pages 271–281 (1943).

DR. T. OCKERSE, Dental Health Officer, Pretoria:

"Report on the Incidence of Dental Caries among School Children", published by the Government Printer (G.P.-S.1658–1944–45).

"Dental Caries", published in *Physical Education*, Vol. V, 20.

"Endemic Fluorosis in South Africa", published by the Government Printer (G.P.-S.6850).

"The Chemical Composition of Enamel and Dentine in High and Low Caries Areas in South Africa", published in the *Journal of Dental Research*, XXII, 6,441 (December, 1943).

"Fluorine Poisoning", published in the *Journal of the South African Chemical Institute*, XXVII, 3 (January, 1944).

"Synopsis of Report on Dental Caries among European School Children, and Dental Caries in South Africa", published in the *South African Dental Journal*, XVIII, 36 (February 1944).

"Synopsis of Report on Dental Caries among European School Children in Age Groups (6–14 years)", published in the *South African Dental Journal*, XVIII, 166 (June, 1944).

DR. S. L. KARK, Medical Officer in Charge, Native Health Unit Polela:

"Adult and Infant Pellagra in South African Bantu", published in the *South African Journal of Medical Sciences* (1943) 8, 106.

"A Health Unit as Family Doctor and Health Adviser" published in the *South African Medical Journal* (1944), Vol. XVIII, 3, 39.

"A Health Study of South African Bantu School Children" published in the *South African Medical Journal* (1944), Vol. XVIII, 6, 100 (with Mr. H. le Riche).

"Cattle and Milk in a Native Reserve", published in *Race Relations* (1944), Vol. XI, 2, 30.

DR. I. GORDON, Assistant Pathologist, Government Pathological Laboratory, Cape Town:

"Cantharidin Poisoning in the Union of South Africa" published in *Clinical Proceedings*, Vol. II, page 293, December 1943.

MR. D. H. S. DAVIS, Ecologist:

"Typhus Fever in the Transkei" (with Drs. J. Gear and B. de Meillon), published in the *South African Medical Journal*, Vol. XVIII, No. 8, April, 1944.

DR. EMILY KARK, Medical Officer, Native Health Unit, Polela:

"Menarche in South African Bantu Girls", published in the *South African Journal of Medical Science* (1943), 8, 35.

Notification of publication of the following handbook by Drs. P. J. RHODES, I. GORDON, and R. TURNER, was received too late for mention in the departmental report for the year ended 30th June 1943:—

"Medical Jurisprudence—A South African Handbook", published in September, 1942 (Stewart Printing Co.).

### 3. HEALTH EDUCATION AND PROPAGANDA.

As indicated in successive annual reports, the important function of health education of the public was delegated by this Department some years ago to the South African Red Cross Society, which receives an annual subsidy of £5,000 from the Department for carrying out this work. The production of propaganda material is carried out by the National Health Education Committee of that Society, while the actual distribution and display of this material to the public and the education of the public in health matters is primarily a function of the individual provincial branches of the Society. The material available for distribution includes films, filmlets or "shorts", pamphlets, leaflets, posters, and charts, the latter for use in schools. As was the case last year, the principal activity of the National Health Education Committee has been the production of films and the display of filmlets on extensive circuits throughout the country. The amount of active propaganda carried out by the individual branches varies greatly and the Transvaal Branch has been far more active than the others in this regard. The need for active dissemination of knowledge on the subject of health is becoming much more widely appreciated and the Department is anxious to further this work in every possible way. A considerable amount of health propaganda material of various sorts is available to local authorities and other interested bodies, both through the Red Cross Society and from the Department direct, and it is encouraging to learn from the Society that there has been a greatly increased demand for this material recently. The space available in this report does not permit the publication of lists of this material but full particulars are available either from the Red Cross Society or the Department respectively.

### 4. LABORATORIES.

The work done at the Department's laboratories at Cape Town and Durban, at the South African Institute for Medical Research and its branches, and at the East London laboratory, is shown in Table 7. As will be seen from the table, the amount of work which was done for the Department of Defence was very much less than during the previous year. This is because that department has done more of its own work at military laboratories.



TABLE 7.—PATHOLOGICAL LABORATORIES: ANALYSES AND EXAMINATIONS, YEAR ENDED 30TH JUNE, 1944.

Particulars.	Government Laboratories.		South African Institute for Medical Research.			East London Hospital Board.
	Cape Town.	Durban.	Johannesburg.	Port Elizabeth Branch.	Bloemfontein Branch.	East London and Border Pathological Laboratory.
Specimens examined for—						
(a) Government Departments:—						
Agriculture and Forestry.....	2	—	—	(a)	(a)	—
Customs and Excise.....	—	—	2	—	—	—
Defence.....	3,262	—	10,846	8,632	4,129	842
Education.....	915	—	—	—	—	—
Finance.....	17	—	—	—	—	—
Interior (including Mental Hospitals) (b)....	908	818	1,758	935	523	13
Justice (including Prisons).....	301	968	3,248	320	248	9
Mines (including Miners' Phthisis).....	—	—	19,066	—	—	—
Native Affairs.....	—	—	—	—	—	—
Post and Telegraphs.....	—	—	—	—	—	—
Public Health (including Leper Institutions)	12,906	9,250	114,393	8,719	5,738	17,983
Public Works.....	—	—	—	—	—	—
S.A. Railways and Harbours.....	253	1,162	—	—	—	—
Others.....	1,309	—	589	—	—	19
(b) General Hospitals (Provincial).....	6,604	27,776	79,859	11,701	4,993	—
(c) Local Authorities.....	44,892	15,893	37,798	27,264	330	—
(d) Medical Practitioners.....	12,555	23,377	22,573	2,457	144	—
(e) Other Governments or Administrations.....	111	21	108	—	—	—
(f) Others.....	—	2,965	34,507	170	2	—
TOTALS.....	84,035	82,230	324,747	63,198	16,107	18,866
Manufactures and Issues—						
Autogenous Vaccines.....	200 (e)	4	32,675 (e)	3,875 (e)	3,425 (e)	6
Bacterial Vaccines.....c.e.	—	—	962,453	(d)	(d)	—
Tuberculin Dilutions.....c.e.	—	—	4,347	48	—	—
Sera (various), Bacterial Filtrates.....c.e.	—	—	3,333,821	(d)	(d)	—
Anti-rabic Vaccine.....c.e.	22,405	—	—	—	—	—
Chaulmoogra Oil Preparations.....c.e.	263,000	—	—	—	—	—
Smallpox Vaccine (prepared at Vaccine Institute, Rosebank)—						
Calf Lymph (issued).....Tubes	5,378,917 (c)	—	783,489	480	905	—
Chick Membrane Lymph (on hand)....Tubes	1,000,000	—	—	—	—	—
Others (oral).....Doses	—	—	44,250	—	—	—
Milk Cultures.....	—	—	10,360	—	—	—
Attendance at Courts of Law by Members of Staff..	230	3	—	—	—	—
Total days absences, entailed by such attendances...	86	3	—	—	—	—

(a) Included under "others".

(b) Now under the Public Health Department.

(c) Manufactured 4,474,000 tubes.

(d) Included in Johannesburg figures.

(e) c.e.

## 5. BIOLOGICAL CONTROL LABORATORIES.

The routine work of this laboratory has been greatly reduced as a

result of war conditions and the secondment of staff to other duties and only a few urgent examinations were carried out.

TABLE 8.—LICENCES ISSUED UNDER THE THERAPEUTIC SUBSTANCES REGULATIONS (GOVERNMENT NOTICE NO. 1131 OF 1935).

Therapeutic Substances.	Manufacturing Licences.			Import Licences.			Research Licences.			Vitamin Permits.		
	Issued 1943-44.	Cancelled 1943-44.	In Force 30/6/44.	Issued 1943-44.	Cancelled 1943-44.	In Force 30/6/44.	Issued 1943-44.	Cancelled 1943-44.	In Force 30/6/44.	Issued 1943-44.	Cancelled 1943-44.	In Force 30/6/44.
Antitoxic and Bacterial Sera.....	2	1	3	1	—	13	1	3	9	—	—	—
Antigens and Bacterial Vaccines..	2	2	14	—	—	14	1	3	9	—	—	—
Arsphenamines and Arsphenamine Derivatives.....	—	—	—	—	—	9	—	—	11	—	—	—
Insulin.....	—	—	—	—	—	12	—	—	11	—	—	—
Pituitary (Post. Lobe) Extract...	—	—	1	—	—	14	—	—	11	—	—	—
Sterilised Surgical Ligatures and Sutures.....	—	—	—	—	—	9	—	—	11	—	—	—
Sex Hormones and Sex Hormone Preparations.....	—	—	—	—	2	21	—	—	—	—	—	—
Vitamins and Vitamin-containing Preparations.....	—	—	—	—	1	6	—	—	—	1	—	19
Antivenomous Sera.....	—	—	—	—	—	1	—	—	—	—	—	—

## 6. PORT HEALTH ADMINISTRATION.

As a result of the changed war situation the amount of shipping which had to be dealt with at Durban was less than during the previous war years. The usual measures were taken to prevent the introduction of disease into the country and a large number of infectious cases were dealt with at the various ports.

Apart from many cases of the commoner infectious diseases, three formidable epidemic diseases, viz. cholera, smallpox, and typhus, were dealt with. A cholera infected vessel arrived in Durban from India but suitable measures, including the placing of the ship in quarantine and the giving of vaccine to all possible contacts, prevented any spread of the disease. A merchant vessel from India arrived at the same port with a case of smallpox on board. The ship was quarantined and all the crew were vaccinated, and, although two further very mild cases occurred among the crew, there was no spread of the disease. Four cases of typhus occurred on two different vessels and at different times in Durban harbour. In both instances suitable measures were taken and there was no spread of the disease. No other cases of formidable epidemic disease occurred on ships but a case of typhus was found in

and removed from the temporary Native location on the graving dock construction works at East London.

The usual steps have again been taken to prevent the introduction of infectious disease in the country by aircraft arriving at the various airports.

## V.—INFECTIOUS AND OTHER DISEASES.

## 1. NOTIFICATIONS.

The total number of notifications of cases of infectious disease was considerably higher than last year. This was largely accounted for by the increased number of cases of typhus and tuberculosis which were notified, although the notifications of some other diseases, particularly meningitis, were also higher than usual. Table 9 shows the number of cases of notifiable diseases reported during the year in the various provinces as well as the total figures for last year for comparison. It must be remembered that many cases, particularly among Natives, are not seen by a medical practitioner and are therefore not notified.



TABLE 9.—NOTIFICATION OF DISEASES BY MEDICAL PRACTITIONERS DURING THE YEARS ENDED 30TH JUNE, 1943 AND 30TH JUNE, 1944.

Disease.	Year Ended 30th June, 1943.	Year Ended 30th June, 1944.										
		Union.	Cape Province, (excluding Transkei).		Transkei.		Natal.		Orange Free State.		Transvaal.	
			European.	Non-European.	European.	Non-European.	European.	Non-European.	European.	Non-European.	European.	Non-European.
Anthrax.....	43	47	4	20	1	—	—	—	2	3	7	10
Diphtheria.....	3,417	3,856	729	446	14	26	628	388	164	69	972	420
Encephalitis, Infective.....	40	55	8	8	—	1	3	5	—	—	20	10
Enteric or Typhoid Fever.....	3,917	3,486	312	639	5	125	94	764	48	249	380	870
Erysipelas.....	382	337	58	53	7	4	19	5	8	2	104	77
Lead Poisoning.....	2	2	—	—	—	—	—	1	—	—	1	—
Leprosy.....	630	827	—	70	—	222	2	172	1	61	12	287
Malta Fever.....	21	20	—	—	—	—	—	1	—	—	16	3
Meningitis, Epidemic Cerebro-spinal	931	2,080	239	1,019	8	8	26	95	6	11	67	601
Ophthalmia, Gonorrhoeal.....	65	141	3	94	—	2	2	32	—	—	—	8
Ophthalmia Neonatorum.....	601	636	25	240	—	8	2	119	—	17	54	171
Plague (for detailed list of cases and deaths, see Table 15).....	77	63	—	20	—	11	—	—	1	28	—	3
Poliomyelitis, Acute.....	36	75	6	4	—	2	5	6	—	1	41	10
Puerperal Fever, including Puerperal Sepsis.....	565	719	41	176	1	33	6	87	4	12	107	252
Rabies.....	1	—	—	—	—	—	—	—	—	—	—	—
Scarlatina or Scarlet Fever.....	2,779	2,237	270	24	24	14	424	14	77	4	1,333	53
Smallpox (for detailed list of cases and deaths, see Table 16).....	1,469	1,046	2	94	—	22	9	653	—	106	7	153
Trachoma.....	105	50	3	9	—	3	—	5	—	1	3	26
Tuberculosis.....	17,136	19,188	612	6,662	3	3,553	221	3,891	16	203	297	3,725
Typhus Fever (for detailed list of cases and deaths, see Table 26)	2,879	5,623	28	1,528	1	3,690	9	76	1	36	2	252
TOTALS.....	35,096	40,488	2,340	11,106	64	7,729	1,450	6,314	328	803	3,423	6,931

## 2. AMOEBIC DYSENTERY.

Attention has been directed in recent years to the increasing incidence of amoebic dysentery in Durban and, at the request of the Natal Provincial Administration, an investigation of this matter was carried out by the Government Pathologist. Information provided by the Provincial Administration indicated that the number of cases treated and the deaths from this disease in various hospitals had increased very markedly, especially among non-Europeans, during the last six or seven years. The importance of the disease in non-Europeans is shown by the fact that during 1943 it caused more deaths in the King Edward VIII Hospital than tuberculosis and cancer combined. Apart from this, public and medical opinion in Durban had come to view with some alarm the supposed prevalence of the infection among Europeans. Before the investigation was started the Department had available the information provided by the examination for *Entamoeba histolytica* of specimens of faeces from 1,500 persons of all races which had been sent for investigation by medical practitioners, presumably on account of symptoms considered to be suggestive of the condition. The results of these examinations were as follows:—

	No. Examined.	No. Positive.	Percentage Positive.
Europeans.....	975	66	6·7
Indians.....	150	6	4·0
Natives.....	375	135	36·0

These figures were somewhat surprising as they indicated that the infection was not as prevalent as was generally supposed among Europeans and even more surprising was the small percentage of positive findings in Indians, in whom the disease was popularly supposed to be so common. The percentage of Natives in whom the infection was found was, however, very high. Further investigations were carried out on 3,432 specimens of faeces taken from representative groups of all three races of the population, both in Durban and in other areas in southern Natal, to ascertain the carrier rate. The positive results obtained expressed in round figures were as follows:—

Europeans.....	5 per cent.
Indians.....	3 per cent.
Natives.....	17 per cent.

These figures confirmed the previous findings, namely, that the Natives were far more heavily infected than either of the other races.

Investigations were carried out in connection with the various possible means of spread, including vegetables grown by Indians which it was popularly supposed were a common source of infection. The conclusion finally reached was that in an urban community having water-borne sanitation and an adequately purified water supply the most potent source of spread was the direct infection of foodstuffs, including milk, by the hands of carriers of the parasite. Attention was, however, drawn to the fact that under more primitive conditions, such as in Native kraals, the infection may frequently be conveyed by flies or by contaminated water supplies. No confirmation was obtained of the popular idea that vegetables grown by Indian market gardeners may be infected, and, in fact, it was finally concluded that this was not a source of danger.

The influence of the different dietetic habits of the three racial groups is discussed in the report and the suggestion is made that malnutrition, which is so prevalent among the Natives, and the drinking of shimiyan and garvini may be important factors in the higher incidence of the disease in that race. Attention is directed to the need for better control of food handlers with the object of eliminating carriers of *Entamoeba histolytica*. Finally, the desirability of finding a simpler, less costly, and more efficacious remedy for the carrier condition is stressed.

The problem is receiving the attention of the Department and further investigations are proceeding, particularly in connection with the possible relationship of the infection with the dietetic customs of the Natives and their habit of consuming home-made alcoholic drinks, and also with a view to finding a more satisfactory method of dealing with the carrier state than is at present available.

## 3. BILHARZIASIS OR SCHISTOMIASIS.

As the Transvaal Bilharzia Committee has not yet succeeded in engaging a medical officer for its mobile unit its efforts to combat bilharziasis had again to be limited to such work as could be undertaken by school medical officers. Mass examinations during the year of children at the following schools revealed that out of 1,688 children in all some 265 were found to be suffering from the disease, i.e., approximately 15 per cent.:—

School.	No. Examined.	No. Positive.
(1) Nylstroom High School and Nylstroom Primary School.....	985	106
(2) Derdepoort School (near Pretoria).....	495	43
(3) Bushbuckridge Mission School.....	100	38
(4) White River Location School.....	108	78

At the two Native schools it was found that the incidence of the disease amongst males and females was practically equal in the case of Bushbuckridge while at White River the incidence amongst females was greater than amongst males. The predominance of the disease amongst Native females as at White River is believed to be attributable to the fact that the females are the water carriers and washer-women and are therefore more exposed to infection. For the same reason the incidence amongst Natives is higher than amongst Europeans.

Treatment was carried out at schools where mass examinations were performed. Although the Committee (with the assistance of the School Medical Service) endeavours, as a matter of policy, to ensure that all cases treated are re-examined at the end of three and also by the end of six months after treatment, it has proved difficult to apply the policy because of the lack of staff and the fact that children may leave school in the intervening periods. The re-examination carried out at schools in the Rustenburg district and at the Derdepoort schools proved reasonably satisfactory in that, out of 199 children examined, 181 were found to have been cured, while 7 of those not cured were found to have been under-treated because of measles. Unfortunately it was not possible to arrange for the re-examination of 29 children.

Although shortages in materials due to the war conditions have hampered progress the Committee has continued to encourage the provision of swimming baths at schools where circumstances indicate the need for such, by way of subsidies. Swimming baths were completed during the year at Marikana and Heuningnestkrans schools while at the close of the year, arrangements were being made for the provision of similar facilities at the Derdepoort and Silverton schools.

It is a matter for regret that it has not yet been possible to secure the establishment of an organisation in Natal corresponding to the Bilharzia Committee of the Transvaal although the Provincial Administration now appears to have conceded the need for some such organisation.

In the field of propaganda the scenario of a Bilharzia film was prepared and certain shots were taken under the direction of the South African Red Cross Society in collaboration with the Department.

## 4. CANCER.

The great importance of cancer as one of the principal causes of death has been referred to in successive annual reports. The high and steadily increasing death rate from this disease is reflected in Table 1. The significance of this increasing death rate is difficult to determine and it is probable that there are several causes. There is no doubt that the increasing average age of the population, which is largely attributable to better public health conditions and which implies that a higher proportion of the population reaches the cancer age, is of considerable importance, while the improvement of facilities for diagnosis probably plays a part. Whether the disease is actually becoming more common and, if so, what factors are responsible for this increased incidence, are matters which urgently require more intensive investigation. Mention has been made in previous annual reports of the work and aims of the National Cancer Association, one of whose principal objects is



the formation of a cancer institute. The intention is that this institute will not only form a centre where cancer treatment is carried out by a team of experts with the most modern equipment, but also that it will serve as a focal point for the collection of data which may have a bearing on the causation and treatment of the disease and for other clinical research. Although the principle of the establishment of such an institute has been agreed to, no material progress has been made in this connection owing to war conditions.

##### 5. DIPHTHERIA.

In successive annual reports attention has been drawn to the unnecessary amount of illness and waste of life resulting from diphtheria which could readily be avoided by the early and systematic immunization of children against the disease. In last year's report emphasis was laid on the prevalence of the disease in very early childhood and the need was stressed for immunization to be carried out during the second half of the first year of life.

In spite of the efficiency of immunization as a means of protection, the incidence of the disease tends to increase year by year and the number of cases notified during the year under review was the highest ever recorded, while during the last three years the total number of cases was approximately two and a half times as great as the number notified during the corresponding three year period in the last decade. The public is undoubtedly showing an increasing interest in the subject of immunization but, although more municipalities are making the necessary facilities available, the response to the Government's offer implied in the Amendment Act of 1938, by which one half of the cost of the material is refundable to local authorities, has been disappointing. In view of the importance of diphtheria and the ease with which it can be prevented, there is a great need for a much more active approach to the subject and for the provision of free facilities for immunization in all local authority areas.

*Extract from Report of Deputy Chief Health Officer (Railways):—*

"*Diphtheria.*—Except for acute dysentery and enteritis, which were notifiable in the municipal area of Durban only, diphtheria was again the most prevalent disease.

It is pleasing to report that the Management recently agreed to the free immunization of the children of railway servants of school-going age and under. . . It is confidently expected that this measure will result in a substantial reduction in diphtheria incidence.

It was recommended to System Managers that health staff, particularly lady welfare officers, should strenuously endeavour to popularise the measure amongst all Railway families. With a view to assisting in this work, a propaganda leaflet (in both official languages) on diphtheria immunization was drawn up by this office of which 10,000 copies were printed. The immunization of 2,320 children has so far been recorded."

TABLE 10.—DIPHTHERIA: DISTRIBUTION OF CASES AND DEATHS REPORTED DURING THE YEAR ENDED 30TH JUNE, 1944.

Area.	European.		Non-European.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cape Province (excluding Transkei)....	729	45	446	47*	1,175	92
Transkei.....	14		26		40	
Natal.....	628	17	388	19*	1,016	36
Orange Free State...	164	4	69	5*	233	9
Transvaal.....	972	86	420	46*	1,392	132
TOTAL.....	2,507	152	1,349	117*	3,856	269

\* Includes registered deaths of Natives in Urban centres only.

##### 6. INFANTILE PARALYSIS (Acute Poliomyelitis).

During the year under review the incidence of this disease was little higher than normal and the majority of the cases occurred in the Transvaal, as indicated in the attached table. Since the end of the report year the number of cases has increased considerably in different parts of the country, more particularly in Natal, especially Durban, on the Reef, and in the Cradock area. The matter will be fully dealt with in the next annual report but in the meantime it must be mentioned that the Department is keeping in close touch with the position all over the country and, in collaboration with the Provincial Administrations and local authorities, is making all the necessary preparations in case the disease should assume epidemic proportions. Statements have been issued to the press from time to time to keep the public properly informed of the position, and to allay any unnecessary alarm.

TABLE 11.—ACUTE POLIOMYELITIS: CASES REPORTED.

Year Ended.	Union.	Cape.		Transkei.		Natal.		O.F.S.		Transvaal.	
		Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.
30.6.34	64	13	16	—	—	—	—	12	5	15	3
30.6.35	61	23	22	—	—	2	—	1	—	9	4
30.6.36	26	7	8	—	1	1	—	—	—	2	5
30.6.37	82	19	8	—	2	4	3	5	10	29	2
30.6.38	18	4	2	—	—	—	—	1	2	4	5
30.6.39	37	9	15	—	1	4	1	2	1	—	1
30.6.40	62	11	20	—	—	4	3	2	1	19	2
30.6.41	92	16	14	—	—	6	1	4	—	39	12
30.6.42	45	10	4	—	2	10	1	—	—	14	4
30.6.43	36	10	3	—	—	12	—	—	1	9	1
30.6.44	75	6	4	—	2	5	6	—	1	41	10

##### 7. LEPROSY.

The compulsory segregation of lepers first became law in the Cape Colony through the provisions of the Leprosy Repression Acts Nos. 8 of 1884 and 31 of 1894, but similar legislation in the other provinces of the Union was only enacted during the first decade of the present century. Until then many lepers were allowed to segregate themselves at their homes or given shelter in lazarettos on the outskirts of their home towns. There are even recorded cases of patients being discharged from an institution because they were unruly. In spite of legislation the control of the disease therefore remained dependent upon the Biblical taboo associated with it.

In assessing the results of compulsory segregation in this country we must, therefore, bear in mind that it has been effective for barely 40 years. Even so, during this period, the disease has been brought under control in the Western Province and the Robben Island Institution which primarily served this area has been closed for more than thirteen years. By the time controlling legislation was passed the disease had spread to the Bantu races, but by the removal of foci of infection, satisfactory control over spread has been maintained as evidenced by the admission rate to our institutions. Improved methods of treatment, introduced during the past sixteen years, have given those suffering from leprosy new hope and have made the effects of the laws of segregation less harsh. Between one-fifth and one-quarter of the population of our institutions is annually released on probation as arrested or closed cases after careful clinical and bacteriological investigation. These cases remain under surveillance for a period of six years.

While it is to be expected that the disease in some of these cases will recrudescence, it has recently been discovered through the investigation of one of our leprologists that our present system of periodic re-examination, which has become largely dependent upon bacteriological investigation, has failed to reveal a fair percentage of cases who show early clinical evidence of reactivity. Although it is not considered that these cases are of great moment from the public health aspect, their earlier discovery will undoubtedly reduce their period of institutional detention on re-admission. The Department being cognisant of this new development is having the matter fully investigated to ascertain what effect it may have on our policy of segregation and the wellbeing of these patients who have been entrusted to our care.

TABLE 12.—LEPER INSTITUTIONS: PATIENTS THEREIN ON 30TH JUNE, 1944.

Institution.	Euro-peans.		Native.		Mixed Coloured.		Asiatic.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Per-sons.
Pretoria...	53	26	549	314	76	31	7	2	685	373	1,058
Mkambati..	—	—	94	100	—	—	—	—	94	100	194
Emjanyana	—	—	315	249	—	—	—	—	315	249	564
Amatikulu.	—	—	267	183	—	—	—	—	267	183	450
Bochem...	—	—	77	55	—	—	—	—	77	55	132
TOTAL.	53	26	1,302	901	76	31	7	2	1,438	960	2,398

TABLE 13.—LEPROSY: FIRST ADMISSIONS, RECRUDESCED CASES, DISCHARGES AND DEATHS, YEAR ENDED 30TH JUNE, 1944.

Institution.	Admissions for First Time.	Recrudesced.	Discharged.	Died.
Pretoria.....	257	40	118	80
Mkambati.....	34	17	46	23
Emjanyana.....	145	63	119	71
Amatikulu.....	112	17	59	50
Bochem.....	15	1	5	3
TOTAL.....	563	138	347	227

TABLE 14.—LEPROSY CASES REMAINING IN THEIR OWN HOMES ON 30TH JUNE, 1944.

	Certified and Awaiting Removal to Leper Institution.	Home Segregated.	Discharged from Leper Institutions.		Total.
			Still under Surveillance.	Released from Surveillance.	
Cape Province (excluding Transkei)....	2	2	193	615	812
Transkei.....	11	2	793	1,430	2,236
Transvaal.....	6	1	736	1,319	2,062
Natal.....	9	—	331	781	1,121
Orange Free State..	5	1	160	247	413
UNION.....	33	6	2,213	4,392	6,644

##### 8. MALARIA.

###### Transvaal.

An epidemic of short duration but considerable intensity broke out in the Olifants River Valley area during the first week in April. This epidemic affected the whole of this valley down to the point where the river passes through the Drakensberg, as well as the Elands River area and the Springbok Flats, where it was very bad. In fact, the area concerned was the same as that which was affected during the severe epidemic in 1939. The outbreak this year reached its maximum intensity within the very short period of three weeks and it lasted until the second week in May. Native Malaria Assistants were seconded from areas where the position was more normal to the epidemic zone.



Additional quinine runners were appointed and over a million tablets of quinine were diverted to the epidemic area for the use of both Europeans and Natives. Supplies of the drug were made readily available at suitable points throughout the area. The small staff and shortage of equipment made it impossible to control *Anopheles gambiae* breeding over this vast terrain. In addition to the Natives in the reserves the Europeans and their Native farm labourers also suffered heavily. The death rate is impossible to assess with any degree of accuracy but from such information as is available it appears to have been low. It seems that many of the deaths which did occur were unnecessary as they were due to Native prejudice against proper medical treatment rather than to any lack of availability of quinine.

In the other malaria areas the incidence of the disease was no greater than that which occurs in a normal season in spite of the fact that flooded areas close to the rivers provided ideal breeding grounds for *Anopheles gambiae*.

As in the past the local authorities in the Transvaal malaria areas have employed staff trained by the Department and their results in the control of malaria have been very satisfactory. The control of the disease on the Letaba Citrus Estates, which are situated in a highly endemic malarious area, has again been very successful.

During each of the last eight years classes of instruction have been held for various groups at the Department's Malaria Research Station at Tzaneen or at other suitable points in the malarious areas of the Transvaal. These classes have provided instruction for doctors taking post-graduate courses for the Diploma in Public Health and the Diploma in Tropical Medicine and Hygiene of the Witwatersrand University, for health inspectors, European teachers and nurses, railway health foremen and, the largest group of all, Native school teachers. The total number of persons who have attended these classes is 823, made up as follows:—

Doctors attending Diploma in Public Health or Diploma in Tropical Medicine and Hygiene course.....	45
Health inspectors attending tropical hygiene course.....	40
European school teachers', nurses' and health inspectors' course.....	233
Railway health foremen's course.....	55
Native school teachers' course.....	450
	—
	823
	==

During the year under review five such courses were held for different groups of Europeans and three for Native school teachers. Most of these courses extended over a full working week. The teaching is of great importance as it enables knowledge of the disease to be spread throughout the malarious districts. Teachers, both European and Native, are able to impart knowledge of the prevention and control of the disease to thousands of children living in our malarious areas while the more technical knowledge acquired by doctors, nurses, health inspectors and health foremen is very valuable.

Propaganda among the general public is carried out by the showing of the Department's malaria film. This, however is unfortunately only possible in urban areas where projectors are available as the necessary equipment for showing the film in the rural areas is lacking.

#### *Natal and Zululand.*

Climatic conditions during the year under review were generally favourable for the control of malaria. The incidence of the disease was comparatively low and was restricted to isolated cases, the majority of which occurred in the coastal and inland valleys of Northern Zululand.

The difficulty of obtaining mosquito gauze suitable for coastal conditions and the scarcity of suitable types of insecticide spray pumps are becoming more pronounced. These factors unfortunately provided convenient excuses for the less conscientious, where cases occurred as a result of obvious ineffective application of control measures. The most seriously affected Area in this respect was the Umfolosi flats, where, on account of local conditions, malaria control largely depends on effective mosquito-proofing and systematic insecticidal spraying of dwellings.

The highest incidence of malaria in the Native areas was in the Nongoma district. This is attributed to two factors, firstly the numerous Natives returning to this district from inland farms, and secondly the employment of susceptible Natives from the highveld on game destruction in connection with the prevention of ngana in the malarious valleys in the eastern parts of the district. The influx of susceptible Natives from farms to the Northern Zululand reserves, particularly in Nongoma and Mahlabatini districts, during the last few years, has greatly increased the difficulty of control. The healthy fever-free sections of these districts are already over-crowded, with the result that new-comers are obliged to settle in the less populous malarious sections. Control of malaria in the Native areas would be simplified by the grouping of kraals on selected and relatively healthy sites, a policy which has been recommended in respect of those Natives obliged to return from farms to the Native areas.

The system of control in European and Native areas of this Province has remained practically the same during the past ten years and may be summarised as follows:—

- (i) Close observation over all known or potential vector breeding places throughout the year.
- (ii) Anti-larval control of all breeding places by weekly application of oil during the malaria season, spring to autumn, and fortnightly application of oil during the winter months.
- (iii) Systematic spraying of dwellings from once to thrice weekly depending on adult infestation and ability to exercise effective anti-larval control.
- (iv) Early diagnosis by blood slide, if possible, of all suspected cases and immediate eradication of mosquitoes from dwellings in which infection has been contracted.
- (v) The elimination of permanent breeding grounds where possible by drainage, fencing, or planting with eucalyptus trees as a means of lowering the water table.

Uniformity and co-ordination of control in contiguous local authority and malaria committee areas comprising the organisation is effected through the departmental inspectors. The low incidence of malaria over the past few years is conducive to apathy in some quarters and to counteract this tendency and maintain the efficiency of the organisation is the Department's primary concern. While the publication of weekly bulletins and the circularising to all units of lists showing the localities from which vectors have been identified serves a useful purpose, personal contact between the Department and malaria committees is essential. The harmonious functioning of the control organisation is in no small measure due to these personal contacts and the opportunity which they afford to discuss difficulties which arise from time to time.

#### *Control of pyrethrum.*

In October, 1943, the control of pyrethrum products was delegated to this Department under the Deputy Chief Health Officer in Durban. In view of the fact that the campaign against adult malaria-carrying mosquitoes depended almost entirely on adequate supplies of pyrethrum being available in the malarious areas of the Union, it was decided to restrict supplies of pyrethrum products to such areas. Supplies were issued on permit to magistrates and local authorities and to dealers in the northern Transvaal, South-West Africa, Zululand and the coastal areas of Natal. Dealers were required to give an undertaking to the controller that the stocks of pyrethrum supplied to them would be used solely for combating malaria. As a result of this system adequate supplies of pyrethrum products were ensured in all malarious areas.

#### *Extract from Annual Report of Deputy Chief Health Officer (Railways).*

"Malaria control continued to be one of the major undertakings on the Natal, Eastern Transvaal and South West Africa Systems and for this reason took precedence over other health activities during the summer months . . .

#### *Seasonal Measures.*

(i) *Transvaal.*—Early spring rains, together with favourable climatic conditions, favoured the breeding of malarial vectors. During December it was necessary to intensify control measures . . .

This contributed materially towards minimising malaria incidence . . .

(ii) *Natal.*—Good results were again obtained in this province, primarily due to the close network of organisations which exist in the control belt, in contrast with the Transvaal, where, due to the small population in relation to the vast territory, it is possible to control only small areas.

Climatic conditions generally did not favour the propagation of the malarial mosquito. North of Empangeni, however, particularly at Hluhluwe, Heatonville, Eteza and Candover, breeding due to favourable meteorological conditions, was very active, and this necessitated the intensification of control measures . . .

*Train and Bus Spraying.*—This aspect again received very close attention. As in the past, all passenger trains operating in or through malarious areas were regularly sprayed either by bedding staff or Health staff . . .

The spraying of Road Motor buses was also given close attention by the drivers of the vehicles.

*Essential Services Protection Corps Posts.*—The Administration again undertook anti-malaria work on behalf of the Defence Department at the various Essential Services Protection Corps posts, between Waterval Boven and Komatipoort. The cost was borne by the Defence Department. The results obtained were satisfactory.

*Co-operative Measures.*—Close co-operation with other Government departments, local authorities, malaria committees and private bodies, both in the Union and in South West Africa, as mentioned in previous reports, was maintained with good results.

Excellent co-operation exists between the Administration and the Union Health Department. That Department has contributed largely towards the success of the Administration's anti-malaria measures . . .

#### 9. PLAGUE.

The majority of outbreaks of plague occurred in the major hyperendemic areas, viz. in the northern Orange Free State, in the Glen Grey and St. Marks districts on the Transkei border and in the Uitenhage district near Port Elizabeth. In all twenty seven outbreaks were reported with 62 cases and 39 deaths. Thirteen outbreaks took place in the Kopjes area of the Vrededorst district in the northern Orange Free State. Plague had a firm hold in the domestic rodents over an area of about one hundred square miles to the north of Kopjes. Farmers within the area collaborated in a drive to stamp out rodents systematically. The Department lent out cyanogas pumps and issued cyanogas dust at cost to successive groups of farmers throughout the area and supervised gassing operations. The response was excellent; farmers are now regularly gassing their premises and considerable progress in ratproofing farm buildings is being made. A similar drive was organised in the Passie area on the Kroonstad-Bothaville border where domestic rodents were dying of plague over a wide area. There were no human cases.

The localised epizootics of plague in gerbilles discovered in July 1943 on the farm Zuurbekom, 17 miles to the southwest of Johannesburg and on the boundaries of Johannesburg, Alberton and Germiston came to an end in September without much further spread partly as a result of a natural decline but mainly as a result of the intensive anti-rodent measures put into operation not only in the infected areas but throughout the length of the Reef. All local authorities, together with the rodent staff of the South African Railways and Harbours and this Department co-operated in a comprehensive drive against gerbilles and domestic rodents which was relaxed in most areas only six months after no further infection was found.

The routine examination of domestic rats from Johannesburg and other areas by the pooled bone marrow technique revealed the presence of virulent *P. pestis* in apparently healthy rats in July 1943 and June 1944 within the Johannesburg municipal area but no evidence of an epizootic even on a small scale could be discovered. No satisfactory explanation of this occurrence can yet be given.



A single human case occurred in a Native on the farm Doornkop over which the epizootic swept from the adjoining farm Zuurbekom. Infection was contracted during the ploughing of lands riddled with deserted gerbil burrows. The case reported from the Johannesburg district was probably contracted in the vicinity of Grasmere, although no conclusive evidence of infection in wild or domestic rodents in the area could be found.

The field staff was much taken up with the control of typhus outbreaks in consequence of which very little time was available for rodent surveys. The Ecologist accompanied Major Gear and Dr. de Meillon from the South African Institute for Medical Research on two expeditions to the Transkei on a typhus survey. The Department dispatched more than 10,000 live gerbilles from the Cape for the manufacture of anti-typhus vaccine at the South African Institute for Medical Research, most of which was used in the Transkei.

TABLE 15.—DISTRIBUTION OF HUMAN PLAGUE AMONG THE DISTRICTS OF THE THREE AFFECTED PROVINCES DURING THE YEAR ENDED 30TH JUNE, 1944.

	No. of Outbreaks.	European.		Non-European.		Total.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cape—							
Glen Grey.....	1	—	—	8	5	8	5
Kuruman.....	1	—	—	2	2	2	2
Queenstown.....	1	—	—	4	3	4	3
St. Marks.....	3	—	—	11	4	11	4
Uitenhage.....	1	—	—	6	5	6	5
	7	—	—	31	19	31	19
Transvaal—							
Johannesburg.....	1	—	—	1	1	1	1
Roodepoort.....	1	—	—	1	1	1	1
	2	—	—	2	2	2	2
Orange Free State—							
Bothaville.....	1	—	—	1	1	1	1
Hoopstad.....	1	—	—	1	1	1	1
Ventersburg.....	3	1	—	2	2	3	2
Vredefort.....	13	—	—	24	14	24	14
Four Districts.....	18	1	—	28	18	29	18
UNION.....	27	1	—	61	39	62	39

#### 10. SLEEPING SICKNESS.

The possibility of this disease being introduced into the Union and the potential danger of the spread of tsetse fly into the north-eastern Transvaal from Portuguese East Africa have been discussed in previous annual reports. Owing to shortage of staff and other war conditions it has not been possible to carry out any further investigations in this connection but the problem will receive further attention as soon as circumstances permit.

#### 11. SMALLPOX.

A larger number of outbreaks occurred than in the year before, 80 districts being involved. All the four Provinces were affected and outbreaks were dealt with at widely scattered centres. The largest number of outbreaks were dealt with in the Transvaal and Natal Provinces. This is no doubt accounted for by the fact that the large Native reserves in these areas are searched for recruits for the war effort with the resulting influx of unvaccinated Natives into the industrial areas. The actual number of cases, though still high, showed a decrease of about 28 per cent. as compared with the year before. The case mortality, all non-European, was 6.9 per cent.

Table 16 summarises the distribution of cases and Table 17 shows the number of vaccinations of infants and children in the classes of the population which register births.

TABLE 16.—SMALLPOX: CASES AND DEATHS REPORTED DURING THE YEAR ENDED 30TH JUNE, 1944.

Province.	Number of Districts in which Outbreaks Occurred.	European.		Non-European.		Total.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cape.....	16	2	—	116	5	118	5
Natal.....	26	9	—	653	62	662	62
Orange Free State	12	—	—	106	1	106	1
Transvaal.....	26	7	—	153	3	160	3
UNION.....	80	18	—	1,028	71	1,046	71

TABLE 17.—VACCINATION OF INFANTS AND CHILDREN IN THE CLASSES OF THE POPULATION WHICH REGISTER BIRTHS, YEAR ENDED 30TH JUNE, 1944.

Particulars.	Cape.		Transvaal.		Natal.			Orange Free State.	Union.
	Cape Peninsula.	Remainder of Province.	Rand Arca.	Remainder of Province.	Durban.	Pietermaritzburg.	Remainder of Province.		
Births entered in Vaccination Register	14,320	41,864	17,768	12,212	3,327	833	1,878	6,210	98,412
Successfully Vaccinated.....	5,385	3,643	7,419	3,688	1,074	353	384	3,504	25,450
Insusceptible to Vaccination.....	8	83	15	12	9	2	2	20	151
Vaccination Postponed owing to illness.....	110	206	64	73	54	10	8	60	585
Previously had Smallpox.....	—	—	—	—	3	—	—	—	3
Deaths of Infants under Two Years Registered.....	3,206	6,829	1,121	778	309	31	154	234	12,662
Exempted under Section 10, Act No. 15 of 1928.....	20	65	110	40	64	16	20	56	391

#### 12. TUBERCULOSIS.

Although schemes for considerable expansion in hospital and sanatorium accommodation have been approved, plans prepared and sites chosen, very little progress has been made in building. Even if more accommodation were available now it would be impossible to make use of it judging by the fact that there are at present 240 beds in existing institutions which cannot be used because of shortage of staff, particularly nursing staff. The small hospital at Springbok was opened after months of delay in getting staff. The position is likely to become even more acute as many of the nursing sisters, who would in normal times have retired, are carrying on for the time being and have rendered most valuable service. Several ex-patients have offered their services and have been of considerable assistance.

The appended tables show the actual number of beds available and planned. Difficulty was experienced in concluding arrangements at Oudtshoorn but the Town Council of Mossel Bay has granted an excellent site and plans have been prepared for a hospital with 100 beds to begin with:—

#### 18.—EXISTING ACCOMMODATION FOR TUBERCULOSIS CASES.

	Number of Beds available as at 30th June, 1944 for—		
	Euro-peans.	Non-Euro-peans.	Total.
A.—Institutions Established and Maintained by the Department—			
King George V Tuberculosis Hospital.....	76	53	129
Nelspoort Sanatorium.....	206	68	274
Rietfontein Tuberculosis Hospital.....	—	148	148
Rietfontein Tuberculosis Hospital (temporary accommodation).....	—	86	86
Springbok Tuberculosis Hospital.....	—	18	18
	282	373	655
B.—Institutions Established by Department, but maintained by Local Authorities and other Public Bodies under Special Agreements—			
MacVicar Tuberculosis Hospital.....	—	100	100
Rentzkies Farm Quarantine Station and Tuberculosis Hospital.....	—	174	174
C.—Locality Authority Schemes (twenty).....	161	522	683
D.—Mission Hospitals (forty-two).....	—	528	528*
E.—Schemes maintained by other Organisations (twelve).....	146	106	252*
TOTAL.....	589	1,803	2,392

\* Approximate only, as such accommodation is not always reserved specially for tuberculosis patients.

#### 19.—PROJECTED TUBERCULOSIS SCHEMES.

	Number of Beds for—		
	Euro-peans.	Non-Euro-peans.	Total.
A.—Departmental Institutions—			
Umtata Tuberculosis Hospital.....	—	100	100
Mossel Bay Tuberculosis Hospital.....	10	90	100
	10	190	200
B.—Institutions being Established by Department, but to be maintained by Local Authorities—			
Rentzkies' Farm.....	—	102	102
C.—Local Authority Schemes (eleven).....	125	413	538
TOTALS (A, B AND C.).....	135	705	846

#### NOTE.

- (1) The actual beddage to be provided in the projected regional Tuberculosis hospital at Port Elizabeth has not yet been finally determined and has therefore not been included. It may be in the neighbourhood of 200 beds.
- (2) The proposals regarding the 214-bed tuberculosis hospital for non-Europeans at Durban are not being proceeded with by the City Council for the present and this projected accommodation has therefore not been taken into consideration in the above schedule.

The completion of the schemes mentioned in Table No. 19 will thus result in some 3,232 beds (724 for Europeans and 2,508 for non-Europeans) becoming available in the not too distant future, a decrease of 83 beds compared with the figure quoted in last year's report for the reason indicated in Note (2). The figures do not, however, take into consideration additional accommodation which may become available through extensions to Mission Hospitals and through the conversion of Military Hospitals after the war.



At the departmental institutions pace has been kept with developments in modern methods of treatment. Sanatorium regime continues to be the fundamental principle of the treatment of pulmonary tuberculosis and the more rigidly the regime is enforced, the better the therapeutical results obtained. At the same time, collapse treatment, particularly artificial pneumothorax collapse treatment, continues to be an important adjuvant to sanatorium treatment, while operative treatment plays its part in certain types of cases.

At Nelspoort Sanatorium and King George V Jubilee Hospital for Tuberculosis, research work has, as in the past, been carried out *pari passu* with treatment, with interesting results. Some of these have formed the subject of the publications by Dr. Dormer and others, referred to in Section IV of this report.

The following tables indicate the numbers of patients who were admitted to, discharged from, or died in, the three institutions maintained by the Department other than Springbok Tuberculosis Hospital which had not commenced to function at the close of the year:—

TABLE 20.—KING GEORGE V HOSPITAL, DURBAN: ADMISSIONS, DISCHARGES AND DEATHS.

Race.	Patients in Residence at 1/7/43.			Patients Admitted during Year.			Patients Discharged during Year.			Patients Died during Year.			Patients in Residence at 30/6/44.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
European.....	42	26	68	41	44	85	36	36	72	12	7	19	35	27	62
Coloured.....	8	9	17	5	7	12	6	9	15	1	4	5	6	3	9
Indian.....	23	11	34	13	7	20	15	2	17	9	7	16	12	9	21
Native.....	2	—	2	16	—	16	9	—	9	6	—	6	3	—	3
TOTAL.....	75	46	121	75	58	133	66	47	113	28	18	46	56	39	95

TABLE 21.—NELSPOORT SANATORIUM: ADMISSIONS, DISCHARGES AND DEATHS.

	Total.	Europeans.			Coloureds.			Military.		
		M.	F.	T.	M.	F.	T.	E.	C.	T.
In Sanatorium on 1/7/1943.	218	44	42	86	27	37	64	68	—	68
Admitted during year.....	454	94	109	203	88	103	191	60	—	60
Died during year	10	1	3	4	2	2	4	2	—	2
Discharged during year....	503	87	105	192	82	103	185	126	—	126
In Sanatorium on 30/6/1944	159	50	43	93	31	35	66	—	—	—

TABLE 22.—RIETFontein TUBERCULOSIS HOSPITAL: ADMISSIONS, DISCHARGES, DEATHS.

	Europeans.		Coloured.		Natives.		Asiatics.	
	M.	F.	M.	F.	M.	F.	M.	F.
In Hospital, 1/7/1943.....	—	—	12	4	27	19	—	—
Admitted during year.....	—	—	4	5	39	24	—	—
Died during year.....	—	—	2	2	28	22	—	—
Discharged during year.....	—	—	1	4	11	5	—	—
In Hospital, 30/6/1944.....	—	—	3	3	27	16	—	—

### 13. TYPHOID OR ENTERIC FEVER.

Attention has been drawn in previous reports to the fact that typhoid fever is becoming more and more a disease of the rural areas and the smaller towns. The incidence of the disease, like that of other intestinal infections, is largely a measure of the degree of insanitation and consequent pollution of water supplies and contamination of milk or other food with bacteria derived from human excrement. The incidence of typhoid fever is reflected in Table 23 which again shows that it is in the smaller towns, where unhygienic conditions prevail, that the disease is most common.

TABLE 23.—TYPHOID OR ENTERIC FEVER: DISTRIBUTION OF CASES REPORTED DURING THE YEAR ENDED 30TH JUNE, 1944.

Area.	European.		Non-European.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cape Province (excluding Transkei)....	312	35	639	193*	951	228
Transkei.....	5	—	125	—	130	—
Natal.....	94	17	764	115*	858	132
Orange Free State....	48	8	249	36*	297	44
Transvaal.....	380	40	870	215*	1,250	255
TOTAL.....	839	100	2,647	559*	3,486	659

\* Includes registered deaths of Natives in urban centres only.

The spread of the disease is eminently preventable by good sanitation the control of fly breeding and satisfactory supervision of food and water supplies, and those local authorities which still have a high incidence of typhoid fever should carefully review their public health services with a view to attaining an improved standard of hygiene.

In Table 24 is shown the provincial distribution of typhoid cases reported during the year under review.

TABLE 24.—TYPHOID OR ENTERIC FEVER: NOTIFICATIONS AND INCIDENCES IN LOCAL AUTHORITY AREAS IN WHICH 10 OR MORE CASES WERE NOTIFIED DURING THE YEAR ENDED 30TH JUNE, 1944 (ARRANGED IN ORDER OF INCIDENCE)—EXCLUDING CASES RETURNED AS "IMPORTED".

Local Authority.	Notifications.			Incidence per 1,000 of Population.		
	Euro-pean.	Non-Euro-pean.	Total.	Euro-pean.	Non-Euro-pean.	All Races.
Williston, M.....	7	38	45	10.59	52.85	32.61
Machadodorp, V.C....	6	8	14	14.93	17.28	16.18
Edenville, M.....	—	14	14	—	32.48	15.71
Trompsburg, M.....	1	15	16	1.23	21.10	10.48
Edendale, H.C.....	1	60	61	18.52	9.79	9.86
Beaufort West, M....	11	55	66	3.04	12.45	8.22
Estcourt, M.....	1	15	16	0.75	10.02	5.64
Umtata, M.....	1	26	27	0.42	8.15	4.85
Kingwillamstown, M.	1	48	49	0.18	9.94	4.73
Kroonstad, M.....	11	50	61	1.86	6.22	4.37
Alexandra, H.C.....	—	54	54	—	3.82	3.82
Ficksburg, M.....	1	17	18	0.40	6.46	3.50
Newcastle, M....	—	17	17	—	5.60	3.45
Bethlehem, M.....	—	32	32	—	5.96	3.01
Hercules, M.....	6	39	45	0.84	3.66	2.53
Port Beaufort, M....	2	8	10	1.36	1.75	1.66
Pretoria, M.....	79	154	233	0.79	3.86	1.66
Aliwal North, M.....	2	10	12	0.80	1.97	1.58
Vereeniging, M.....	2	33	35	0.22	2.33	1.50
Graaff-Reinet.....	3	14	17	0.69	1.86	1.43
Cradoek, M.....	3	10	13	0.75	1.80	1.36
Uitenhage, M.....	7	21	28	0.74	1.88	1.36
Queenstown, M.....	5	20	25	0.64	1.73	1.29
Klerksdorp, M.....	2	10	12	0.32	2.28	1.13
Durban, M.....	48	211	259	0.46	1.39	1.01
Germiston, M.....	17	55	72	0.52	1.30	0.96
Grahamstown, M....	6	11	17	0.80	0.95	0.89
Oudtshoorn, M.....	2	11	13	0.25	1.64	0.88
Cape Town, M.....	79	138	217	0.50	1.07	0.72
East London, M.....	11	23	34	0.48	0.92	0.71
Pietermaritzburg, M.	6	27	33	0.22	1.06	0.62
Springs, M.....	6	36	42	0.27	0.53	0.46
Kimberley, B. of H..	—	17	17	—	0.71	0.43
Benoni, M.....	4	28	32	0.19	0.49	0.41
Rooodepoort, M.....	7	11	18	0.40	0.36	0.37
Johannesburg, M....	50	130	180	0.18	0.58	0.36
Bloemfontein, M.....	9	7	16	0.34	0.24	0.29
Krugersdorp, M.....	3	12	15	0.15	0.33	0.26
Brakpan, M.....	6	5	11	0.26	0.13	0.18

### 14. TYPHUS OR RICKETTSIOSIS.

This formidable disease has been a cause for more than usual concern to the Department in the year under review. Its prevalence in the European war zones at the same time attracted attention of both the public and the scientific workers in this country and helped to focus attention on the considerable increase of cases and notification of deaths in the Transkei and Ciskeian territories in particular.

A total of 5,623 cases with 2,600 deaths was notified of which 41 with 3 deaths were amongst Europeans. The wide publicity in the affected areas especially, doubtless improved the notification of cases and deaths. The latter appear high in comparison with other years, due partly to more complete notification and not entirely to increased incidence and virulence.

The accompanying graph of cases and deaths year by year since 1917 shows clearly the present position, while the actual incidence of the disease since 1917 is indicated in Table 25.

The disease is invariably aggravated by famine which has preceded each sudden rise in incidence in South Africa.

The total cases this year has not reached the height of the 1933-35 epidemic in spite of all indications that it would. The rapid expansion of the anti-typhus organization early in 1944 with the help of qualified military personnel and other field staff undoubtedly played a large part in checking the rapidly rising figures.

The Medical Inspector of the Department in the Transkei drew attention to the particularly rapid increase of cases in the latter half of 1943, and, directly as a result of this, a preliminary investigation was carried out in that territory in November, 1943, by Major James Gear, Dr. B. de Meillon of the South African Institute for Medical Research, and Mr. D. H. S. Davis of this Department. Certain valuable findings were reported and for the first time in South Africa the louse was definitely proved to be the vector although this fact had always been presumed previously.

In February, 1944, the same group of investigators and two medical officers of the Union Health Department visited the Transkei to assist the Medical Inspector in planning and starting an intensified campaign of propaganda, de-verminisation and immunization. The response by the Natives was excellent in general, and a greatly increased medical and field staff had to be employed. The co-operation of the Director-General of Medical Services in augmenting the staff from their personnel is greatly appreciated. One of these units has been doing excellent work in the Ciskei also where several outbreaks were reported.

Typhus also made its appearance in the Volksrust and Wakkerstroom area and Klerksdorp has been similarly troubled, but the main prevalence, as in the past, has been in the Transkeian Territories.

Because of the difficult terrain and the scattered distribution of the people, de-verminisation of a population of over 1½ million Natives presents many practical problems.

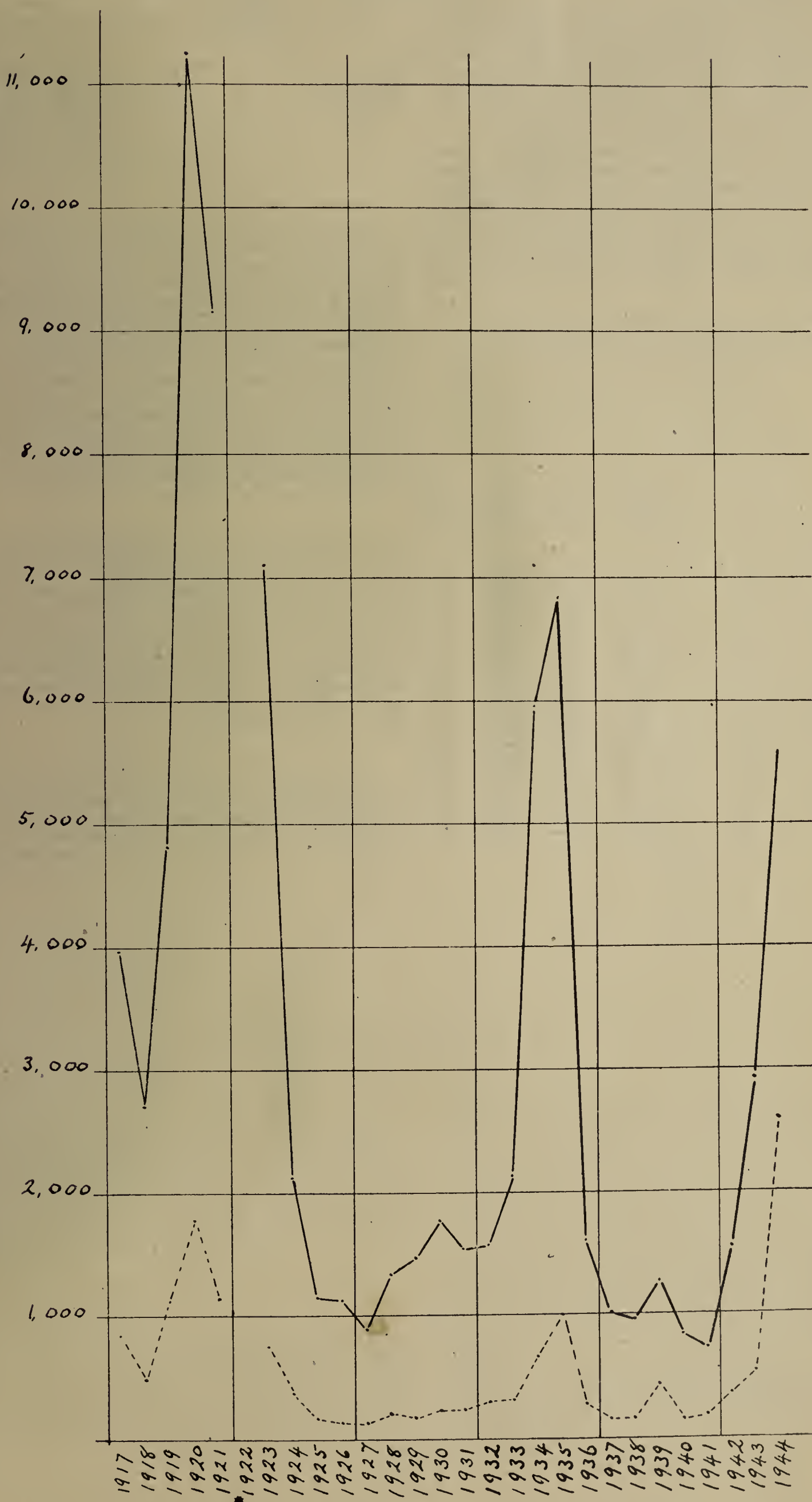
The low standard of education and the great numbers of "raw" Natives involved makes the eradication of the louse, and therefore of typhus, exceedingly difficult apart from the contributory economic and climatic factors. Steam de-verminization has a fleeting effect on the louse population and in many cases lice are evident again within a week.

Nevertheless, intensive propaganda, de-verminisation and inoculation with the recently introduced South African anti-typhus vaccine (made both from peritoneal washings of infected gerbilles and from yolk-sac cultures) has undoubtedly restricted the anticipated increase of cases and deaths in the winter months.



# TYPHUS FEVER.

GRAPH SHOWING ACTUAL CASES (—) AND DEATHS (---) DURING EACH OF THE YEARS  
1917 TO 1944.



\* No figures available owing to change-over from Calendar year to Health year.



In order to reduce the risk of further famine, the attention of the authorities concerned was drawn to the need for an increased supply of the staple food, maize. Headmen were called together by magistrates and warned to conserve their supplies by preventing rodent damage to it and its waste in beer making.

To prevent the spread of typhus to areas outside the Native territories measures were introduced requiring deverminisation and inoculation of all Natives leaving the territories, and for this purpose, deverminising stations were set up at strategic railway and other centres.

In April, 1944, negotiations were started for the production in South Africa of the now widely talked of substance D.D.T. Shortly thereafter samples were available and there is every hope that early in 1945, sufficient quantities for dealing with typhus and various other insect borne diseases will become available. Local tests on certain insects, including lice and bed bugs, have been most encouraging.

The practical methods of application of this substance have received the careful attention of the Department, bearing in mind the scattered population and the inaccessibility of many kraals and persons suffering from the disease and will be put into practice on an increasing scale.

An excellent and up to date outline of Typhus Fever in the Transkei was the subject of a classic article which appeared in the *South African Medical Journal*, 22nd April, 1944, under the names of Major James Gear, Dr. Botha de Meillon and Mr. D. H. S. Davis. Its perusal is illuminating and it should be widely read by epidemiologists interested in the problem.

The distribution of the disease in provinces is indicated in Table 26.

TABLE 25.—INCIDENCE OF TYPHUS FEVER IN THE UNION OF SOUTH AFRICA, 1917-1944.

Period.	Europeans.		Non-Europeans.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Calendar Year—						
1917.....	31	5	3,935	832	3,966	837
1918.....	9	3	2,699	492	2,708	495
1919.....	25	4	4,803	1,118	4,828	1,122
1920.....	81	12	11,195	1,779	11,276	1,791
1921.....	132	17	9,025	1,123	9,157	1,140
1st Jan.—30th June, 1922.....	33	6	2,559	378	2,592	384
Year ended 30th June, 1923.....	56	6	7,043	749	7,099	755
1924.....	46	3	2,076	379	2,122	382
1925.....	37	—	1,107	163	1,144	163
1926.....	55	1	1,080	145	1,135	146
1927.....	39	2	856	134	895	136
1928.....	52	—	1,279	208	1,331	208
1929.....	45	—	1,435	193	1,480	193
1930.....	74	5	1,708	207	1,782	212
1931.....	53	2	1,488	214	1,541	216
1932.....	33	2	1,517	290	1,550	292
1933.....	54	3	2,071	299	2,125	302
1934.....	45	3	5,911	659	5,956	662
1935.....	97	5	6,729	993	6,826	998
1936.....	40	2	1,565	282	1,605	284
1937.....	36	6	971	162	1,007	168
1938.....	37	1	945	167	982	168
1939.....	27	3	1,246	421	1,273	424
1940.....	20	2	821	144	841	146
1941.....	23	—	691	176	714	176
1942.....	18	1	1,528	358	1,546	359
1943.....	27	3	2,892	518	2,919	521
1944.....	41	3	5,582	2,597	5,623	2,600

TABLE 26.—TYPHUS FEVER: CASES AND DEATHS REPORTED DURING THE YEAR ENDED 30TH JUNE, 1944.

Province.	Number of Districts in which Outbreaks Occurred.	European.		Non-European.		Total.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cape.....	56	29	3	5,218	2,509	5,247	2,512
Natal.....	7	9	—	76	7	85	7
Orange Free State	7	1	—	36	14	37	14
Transvaal.....	13	2	—	252	67	254	67
UNION.....	83	41	3	5,582	2,597	5,623	2,600

15. VENEREAL DISEASE.

In the last annual report a warning note was sounded regarding the likelihood that venereal disease may show an increased incidence as a result of the abnormal conditions caused by the war. Experience in the past has shown that this is an almost inevitable result of the disruption of family life, the tendency to psychological instability and the relaxation of moral standards brought about by the stress of war conditions. While these factors naturally operate most potently in those countries where the war is actually being waged, similar influences are at work in all belligerent countries. This tendency can to some extent be counteracted by educational and propaganda work and also by the provision of adequate facilities for the treatment of the venereal diseases. There is a general impression that the public, both European and non-European, is becoming more conscious of the need for thorough and prolonged treatment. The free treatment of cases of venereal disease is one of the primary duties of the Department's district surgeons except in those large local authority areas where the municipalities maintain venereal disease clinics.

In successive annual reports attention has been drawn to the fact that in practically every case of venereal disease, infection is conveyed by sexual intercourse with an infected partner. It is considered necessary to emphasise again this fundamental fact, a clear understanding of which is absolutely essential, as the possibility of innocent infection from Native servants and others, which in actual fact is extremely remote, still looms far too large in the public mind and tends to obscure the main issue. The control of venereal diseases depends not on repressive legislative measures, such as are sometimes advocated, but on the education of the people to a realization of the true nature of the problem and how it can be avoided, and to the development of higher social and moral standards.

Table 27 shows the numbers of cases treated by district surgeons, at municipal clinics, and in hospitals, conducted by both municipalities and this Department. The table has been altered this year by the deletion of the upper part because it was found that the figures published in this part in previous years were also included in the lower part of the table. The table as now published shows the position more clearly.



TABLE 27.—VENEREAL DISEASES CASES TREATED AND ATTENDANCES, YEAR ENDED 30TH JUNE 1944.

Locality.	IN HOSPITAL.						OUTDOOR.					
	Syphilis.		Gonorrhoea and Other Venereal Diseases.		Total.		Syphilis.		Gonorrhoea and Other Venereal Diseases.		Total.	
	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.
BY GOVERNMENT AND LOCAL AUTHORITY. Medical Officers.												
Alexandra.....	—	—	—	—	—	—	—	6,403	—	1	—	6,404
Adelaide.....	—	—	—	—	—	—	—	200	—	—	—	200
Aliwal North.....	—	—	—	—	—	—	—	792	—	—	—	792
Barberton.....	—	775	—	—	—	775	—	—	—	—	—	—
Beaufort West.....	—	—	—	—	—	—	—	526	—	—	—	526
Benoni.....	—	—	—	19	—	—	258	5,735	12	5	270	5,740
Bethlehem.....	—	45	—	—	—	64	—	390	—	18	—	408
Bethulie.....	—	—	—	—	—	—	—	27	—	—	—	27
Bloemfontein.....	13	261	4	41	17	302	844	9,879	—	—	844	9,879
Bochem.....	—	769	—	9	—	778	—	1,041	—	3	—	1,044
Boksburg.....	—	—	—	—	—	—	270	4,508	45	6	315	4,514
Brakpan.....	—	—	—	—	—	—	95	3,337	2	47	97	3,384
Cape Town.....	49	123	50	153	99	276	5,956	37,335	1,982	7,955	7,938	45,290
Cape Divisional Council.....	—	—	—	—	—	—	413	5,605	38	234	451	5,839
Darling*.....	—	—	—	—	—	—	—	—	—	—	—	—
De Aar.....	—	—	—	—	—	—	—	204	—	9	—	213
Durban (Addington).....	19	70	34	117	53	187	3,341	37,781	1,205	23,182	4,546	60,963
East London.....	—	—	—	—	—	—	386	8,989	49	417	435	9,406
Elun.....	—	408	—	11	—	419	—	—	—	—	—	—
Ficksburg.....	—	—	—	—	—	—	—	469	—	—	—	469
Fraserburg*.....	—	—	—	—	—	—	—	—	—	—	—	—
Germiston*.....	—	—	—	—	—	—	2,097	5,950	1,236	29	3,333	5,979
Gordons Bay.....	—	—	—	—	—	—	—	71	—	—	—	71
Hanover.....	—	—	—	—	—	—	—	177	—	—	—	177
Heilbron*.....	—	—	—	—	—	—	—	—	—	—	—	—
Hereules.....	—	—	—	—	—	—	—	7,955	—	128	—	8,083
Jansenville.....	—	—	—	—	—	—	—	—	—	—	—	—
Johannesburg.....	—	—	—	—	—	—	1,680	3,053	638	241	2,318	3,294
Kenhardt.....	—	—	—	—	—	—	—	37	—	—	—	37
Kimberley.....	3	348	—	103	3	451	29	10,784	1	692	30	11,476
King Edward VIII (Durban).....	—	2,767	—	2,185	—	4,952	—	—	—	—	—	—
Kingwilliamstown.....	2	211	—	29	2	240	30	1,103	—	13	30	1,116
Kokstad.....	—	—	—	—	—	—	—	3,578	—	—	—	3,578
Kroonstad.....	—	—	—	—	—	—	—	891	—	—	—	891
Krugersdorp.....	—	—	—	—	—	—	—	1,510	—	7	—	1,517
Kuruman.....	—	50	—	—	—	50	—	348	—	—	—	348
Lichtenburg*.....	—	—	—	—	—	—	—	—	—	—	—	—
Molteno.....	—	—	—	—	—	—	—	46	—	—	—	46
Mossel Bay.....	—	—	—	—	—	—	75	272	94	—	169	272
Nelspruit*.....	—	—	—	—	—	—	—	—	—	—	—	—
Newcastle*.....	—	—	—	—	—	—	—	—	—	—	—	—
Oliphantshoek.....	—	—	—	—	—	—	—	323	—	77	—	400
Oudtshoorn.....	—	—	—	—	—	—	1,259	5,078	—	—	1,259	5,078
Paarl.....	—	—	—	—	—	—	11	275	—	—	11	275
Paarl Divisional Council*.....	—	—	—	—	—	—	—	—	—	—	—	—
Pietermaritzburg.....	—	1,146	—	560	—	1,706	—	—	—	—	—	—
Pietersburg.....	—	—	—	—	—	—	—	377	—	—	—	377
Piet Retief.....	—	139	—	53	—	192	—	119	—	32	—	151
Port Elizabeth.....	—	—	—	—	—	—	1,847	16,982	259	1,599	2,106	18,581
Port Shepstone*.....	—	—	—	—	—	—	—	—	—	—	—	—
Potechefstroom.....	—	—	—	—	—	—	—	1,717	—	—	—	1,717
Pretoria.....	—	—	—	—	—	—	2,834	21,017	1,502	3,431	4,336	24,448
Randfontein.....	—	—	—	—	—	—	—	347	—	—	—	347
Rietfontein.....	33	5,084	31	2,519	64	7,603	—	—	—	—	—	—
Rustenburg.....	—	—	—	—	—	—	—	3,337	—	23	—	3,360
Sekukuniland.....	—	170	—	9	—	179	—	137	—	3	—	140
Senekal*.....	—	—	—	—	—	—	—	—	—	—	—	—
Springs.....	—	—	—	—	—	—	610	13,274	265	3,222	875	16,496
Stanger.....	—	—	—	—	—	—	—	115	—	3	—	118
Standerton.....	—	—	—	—	—	—	—	118	—	—	—	118
Stellenbosch.....	—	—	—	—	—	—	11	1,956	—	—	11	1,956
Stellenbosch Divisional Council.....	—	—	—	—	—	—	—	665	—	—	—	665
Sterkstroom*.....	—	—	—	—	—	—	—	—	—	—	—	—
Steynsburg.....	—	—	—	—	—	—	—	1,038	—	—	—	1,038
Swellendam.....	—	23	—	—	—	23	—	—	—	—	—	—
Tulbagh.....	—	—	—	—	—	—	—	—	—	—	—	—
Uitenhage.....	—	30	—	4	—	34	—	1,649	9	12	9	1,661
Umtata.....	—	—	—	—	—	—	—	128	—	1	1	129
Vereeniging.....	—	—	—	—	—	—	42	9,880	—	227	42	10,107
Vryburg.....	—	131	—	—	—	131	—	—	—	—	—	—
Wellington*.....	—	—	—	—	—	—	—	—	—	—	—	—
Winburg.....	—	—	—	—	—	—	—	223	—	—	—	223
TOTAL.....	119	12,550	119	5,812	238	18,362	22,088	237,751	7,337	41,617	29,426	279,386

\* No returns submitted.

## 16. YELLOW FEVER.

The usual precautionary measures have been taken at the sanitary aerodromes for preventing the introduction of yellow fever into the country. Inoculation of persons leaving the Union by air continues, the vaccine used being that supplied by the Rockefeller Foundation. The equipment needed for the production of the vaccine in South Africa arrived towards the end of 1943 and its installation at the yellow fever laboratory was undertaken by the Public Works Department. Since the end of the year under review this work has been completed and the production of vaccine will now be possible.

## VI.—GENERAL.

## 1. HOUSING AND SLUM ELIMINATION.

The difficulties referred to under this heading in last year's report as having been experienced by the Central Housing Board during the previous three years, have manifested themselves more or less to the same extent during the year under review. The position regarding building materials has shown little, if any improvement, nor has it been possible successfully to overcome other deterring factors, such as, amongst others, the rising cost of building and the enhanced price of

land, with the result that progress in the construction of dwellings has not been such as the shortage of houses in the country demanded.

The Government has been alive to the position and, as foreshadowed in these columns last year, has now passed the Housing Amendment Act, 1944, which measure is designed to improve the machinery for accelerating the erection of houses. The place of the Central Housing Board has been taken by the National Housing and Planning Commission and the new body has been given much wider powers than the old one enjoyed. The Commission has succeeded in establishing close collaboration with Building Control and, besides having available the services of a director of housing, will have in its employ qualified technical officials, including several inspectors of works whose duties will mainly be under the direction of the Director, to assist and guide the smaller local authorities in the carrying out of their schemes, a task which such local authorities, on account of not being able to afford the services of qualified people, as a rule find quite beyond their capabilities.

The position in regard to building materials has lately shown a tendency to "ease" and, in view of all the changed circumstances, there are grounds for believing that a more vigorous and effective housing policy will be able to be pursued than has been possible under the old conditions.



TABLE 28.—HOUSING ACT NO. 35 OF 1920: WORKING FROM PROMULGATION, 16TH AUGUST, 1920, TO 30TH JUNE, 1944.

Province.	Loan Applications Approved.			Loan Issues.	Number of Houses.					
	European.	Non-European.	Total.		Complete.	Under Construction.	Approved, but not yet commenced.	Total.	Total for European Occupation.	Total for Non-European Occupation.
(A) <i>Economic Housing.</i>	£	£	£	£						
Cape.....	2,087,530	672,817	2,760,347	2,575,656	7,644	146	529	8,319	3,236	5,083
Natal.....	660,156	277,503	937,659	723,535	1,186	27	268	1,481	613	868
Orange Free State.....	733,205	20,618	753,823	742,477	1,847	366	366	2,579	939	1,640
Transvaal.....	2,925,549	293,412	3,218,961	3,030,959	5,661	74	364	6,099	3,594	2,505
TOTAL.....	6,406,440	1,264,350	7,670,790	7,072,627*	16,338	613	1,527	18,478	8,382	10,096
(B) <i>Sub-Economic Housing.</i>										
Cape.....	1,348,419	6,118,232	7,466,651	4,432,017	9,618	1,791	8,979	20,388	2,749	17,639
Natal.....	18,452	1,689,244	1,707,696	830,787	748	161	2,362	3,271	20	3,251
Orange Free State.....	128,492	96,675	225,167	37,687	235	—	97	382	123	259
Transvaal.....	1,395,272	3,816,668	5,211,940	3,258,078	8,304	969	6,017	15,290	1,744	13,546
TOTAL.....	2,890,635	11,720,819	14,611,454	8,558,569	18,955	2,921	17,455	39,331	4,636	34,695
(C) <i>Housing of Aged Poor.</i>										
Cape.....	47,229	21,243	68,472	35,130	252	23	93	368	170	198
Natal.....	25,000	—	25,000	25,000	50	—	—	50	50	—
Orange Free State.....	42,025	—	42,025	42,025	76	—	—	76	76	—
Transvaal.....	32,380	—	32,380	14,366	8	3	24	35	35	—
TOTAL.....	146,634	21,243	167,877	116,521	386	26	117	529	331	198
TOTAL: (A), (B) AND (C)....	£9,443,709	£13,006,412	£22,450,121	£15,747,717	35,679	3,560	19,099	58,338	13,349	44,989

\* Includes £2,698,001 reissued out of repaid capital.

## 2. RURAL AND PERI-URBAN SANITARY CONDITIONS.

While progress in bringing the numerous insanitary areas in the Union under satisfactory control has not, on the whole, been considerable, there have been a few encouraging developments since the last annual report was framed.

As a result of a conference with the Railway Administration and the Provincial Administrations, convened at Pretoria on the 16th November, 1943, by the Department, positive action is now being taken to institute forms of control over Railway Reserves and contiguous areas mutually satisfactory to the Railway Administration on the one hand and the Provincial Administrations on the other hand.

Conditions in the Division of Kimberley have been a source of considerable anxiety to the Department which has consistently urged the local authorities concerned to effect necessary improvements. The present division of responsibilities under the Public Health Act, as between the Divisional Council and the Board of Health, has, however, hampered progress, and the Department has been compelled to await the report of the National Health Services Commission before taking further action.

The areas formerly under the control of the Village Management Board of Woodbrook and the Local Board of Abbotsford were included in the Municipality of East London with effect from the 10th June, 1944. Thus the only remaining area in the vicinity of East London dealt with by the Urbanised Areas Administration Committee (Interim Report No. 25) which has not yet been incorporated in the municipal area of East London is Amalinda.

Owing to legal difficulties it has not yet proved possible to institute satisfactory control over the area of Bethelsdorp, near Port Elizabeth, and the existing Local Board is therefore still functioning to the best of its ability.

In Natal one new local authority was established during the year, namely St. Michael's-on-Sea Health Committee. The Glebe Lands, referred to by the Urbanised Areas Administration Committee in Interim Report No. 58, are in process of being acquired by the Borough Council of Durban for Native location purposes, and improvements in respect of the sanitary conditions may now be expected to result. Otherwise little progress has been made by the Provincial Administration in bringing the "black belts" of the Province under proper control, and no additional areas have been placed under the jurisdiction of the Local Health Commission.

The position with regard to peri-urban areas of Bloemfontein in the Orange Free State shows little change but there have been indications that the Provincial Administration is contemplating the adoption of suitable measures to cope with the problems in the near future.

In the Transvaal, the Peri-urban Areas Health Board has now been established but the areas to be placed under its jurisdiction have not yet been defined. Meanwhile the four health inspectors appointed to operate in the peri-urban areas of the Witwatersrand and Pretoria continue to function under the supervision of the Magistrates concerned.

In December, 1943, a Water Supply Bill was drafted by the Department with the object of establishing machinery for ensuring the provision of satisfactory domestic water supplies in various parts of the Union including the numerous seaside resorts where the problem has become acute. It was hoped, originally, that it might be possible to introduce the Bill into Parliament during the 1944 session but owing to objections on constitutional grounds raised by the Provincial Administration of Natal, as well as the fact that the comments from other interested authorities were not received in time, the hope was not realised.

## 3. NATIVE HEALTH SERVICES.

*Transkei.*

As indicated in last year's Annual Report, the Umtata Rural Clinics scheme, which was originally established in January, 1941, with generous financial assistance given by the Native Recruiting Corporation, was taken over by the Department in April, 1943. This unit has continued to do very valuable work in spite of the fact that the ordinary routine has been somewhat disturbed, although not actually stopped, by the intensive anti-typhus campaign which has been carried on in the Transkeian and Ciskeian territories. Medical aids attached to the unit have at different times had to be seconded to anti-typhus work and the staff has been greatly depleted in this way and, in fact, for a time the medical officer in charge of these clinics was engaged in a whole-time capacity in the anti-typhus campaign.

In spite of the difficulties further progress has been made with ante-natal and infant welfare work and the treatment of minor ailments at the clinics, as well as with the system of visiting the Natives in their kraals to render district nursing services and to give advice on matters of health and hygiene. In fact, the work of the clinics has grown so rapidly that the appointment of additional nurses has been authorized. These will be stationed chiefly at clinics where there is no resident medical aid or where the district nursing work has developed to such an extent that one nurse cannot cope with it in addition to her usual clinic duties. Advantage has also been taken of the clinics to give experience in the organisation of health work to other district nurses who are normally stationed in more remote parts of the Transkei, outside the Umtata district, and who work under little supervision. These nurses are invited to spend a month working at one of the Umtata clinics and several of them have taken advantage of the offer. At the Kambi clinic in the Umtata district a community centre is being established with the assistance of the Departments of Native Affairs and Education.

During the latter half of 1943 useful work was done by the Medical Aids in the schools nearest to each of the seven clinics in the Umtata district. This included the physical examination of each child and the monthly weighing of all children. The intention is that each child should be examined by the Medical Aid at least once a year and that children who show defects should be referred to the Medical Officer for further investigation. In addition to this, weekly health talks on subjects of topical interest are given and healthy and useful activities such as gardening and participation in sport are encouraged. Daily sick parades are held at which minor ailments are dealt with and the pupils are instructed in matters such as the doing of simple dressings, the disposal of soiled material and delousing. The homes of the parents are visited, the intention being to visit each home at least once a year and more often where there is some special need. During the first half of 1944 these activities had to be greatly reduced owing to the secondment of Medical Aids to the anti-typhus campaign, but the nurses at the clinics have at least kept up the health talks and the daily sick parades.

The Transkeian Co-ordination Welfare Council, which was established in 1942 and whose aim it is to co-ordinate all the welfare services in the Transkei, held four successful meetings. Subjects of particular interest discussed during the year were the establishment of a community centre at Kambi, a plan for the increased afforestation of the Transkei, the syllabus for the training centre for female Bantu community workers at Tsolo, the need for better hygienic conditions in schools, and the school feeding scheme.

*Natal.*

The Polela Health Unit has continued to do very useful work. The home visit is the basis of all the Unit's activities. The system involves



ontinue visits by Health Assistants to *all* the homes in certain areas and is not merely a follow-up system of cases who present themselves at the clinics. The difference between these two methods is of the utmost importance, for in this system the home is regarded as the focus of the service while in the follow-up system the clinic is the focus, the home being visited only after a patient has attended for treatment. In the latter system the home is only studied once there has been a breakdown in the health of one or more members of the family, whereas the routine home visit allows for analysis of conditions under which the family is living before someone of that home has felt ill enough to go to a doctor or clinic. In this way various factors which might produce illness can be assessed and changes encouraged which might improve health standards and thus prevent disease. Considerable perseverance is required, for at each visit not only changes in previously recorded findings must be noted, but additional factors must be analysed. This differs from the more usual survey methods, as experience has shown that attempts to carry out anything in the nature of a complete survey of home conditions are not only impracticable but also undesirable. Recording of such surveys is often of a static nature and, while useful for survey purposes, is not desirable for the practice of social medicine by a Health Unit. In one home immoral behaviour of a woman might be the outstanding social defect, in another alcoholism, in yet a third lack of education or false beliefs regarding health and disease. It is these personal aspects which concern our Unit, and no simple survey record sheet can convey these human traits without noting their development, cause, influence on others, and future prospects. Thus our field workers have continually to bear these facts in mind and much time of the medical officer in charge is spent in directing the programme of these home visitors in regard to individual families under their care.

The work of the past four years has given us sufficient evidence to indicate that the method is correct and that with increasing skill a service is developing which is not only radical in approach but is radically affecting the lives of the people it serves. For the satisfactory carrying out of this system, adequate training of field personnel of both sexes is essential, as is also a system of supervision and recording of data which allows not only for co-ordination of home and clinic services, but which includes a filing system of a dynamic nature. The clinic team was strengthened during the year by the appointment of another Medical Aid and a probation Medical Aid, as well as a Native Woman Health Assistant and three probation nurses who are receiving training as Women Health Assistants in addition to their duties at the clinics.

Progress has been made in a number of ways during the year. The intensive family welfare plan now includes some 5,000 persons, an increase of about 2,000 since 1943. The increase in nursing staff has enabled much more work of a personal nature concerning women and children to be undertaken and a pre-school child centre has been established. In the field of nutrition the school feeding scheme has enabled the Unit to provide a daily meal in several schools in the area, while the weekly nutrition clinic has been expanded to include recreation. In connection with mental hygiene, steps are being taken to counteract superstitious beliefs and attitudes which are detrimental to health. Several other similar developments are contemplated.

The weekly welfare clinic for mothers with their babies and young children has been continued. It is confined to healthy children and is only attended by those who are referred after medical examination. Children are weighed, examined for signs of care or lack of care, such as cleanliness and state of nails, and the mother is asked about feeding habits and general behaviour. Following this, the nurse-in-charge outlines the feeding requirements for the next week and, when necessary, gives the mother food supplements, such as dried milk or vitaminised oil. When the mothers and children have been attended to individually a general lecture is given by a member of the staff and questions are encouraged.

It has become increasingly evident that the health habits of the average schoolchild in this area are very poorly developed. This is due to the low standard of personal hygiene in the average home. By the time a child goes to school, often not before it is 8 to 10 years old, it is in many cases too late to remedy the habits which have been formed at home. Furthermore, standards of hygiene in the schools themselves are often very deficient. For these reasons it was decided to test out the possibilities of a pre-school child centre where children would attend regularly, as is done in the case of nursery schools. A young married woman who was once headmistress of a school was appointed as supervisor of the centre. The number of children admitted was limited to a maximum of 25. The aims of this centre are to develop routine habits encouraging discipline, personal hygiene and mental development, while at the same time routine examinations including growth studies and laboratory tests are undertaken. Physical development is encouraged through games and physical training, and the improvement of nutrition. Biological knowledge is imparted while attempts are made to counteract superstitious beliefs by incorporating many Bantu concepts in the form of nursery rhymes, fairy tales and games. The development of the artistic senses is encouraged through music, singing and art. Prophylactic measures are taken against infectious diseases, and disorders and diseases which do occur are treated.

The short period during which the Unit has been practising social medicine has indicated its value for in many respects the families of the area have been stimulated to help themselves in maintaining health. The rapid progress made in the area is due largely to the intimate knowledge which the Unit has developed regarding the lives of so many of the people it seeks to serve. This knowledge has encouraged and stimulated the personal interest of the staff in the day-to-day problems of the people, with the result that the Health Unit has come to be part of their daily lives, influencing an ever increasing number of their activities in health and sickness, at school, at work, and in the home.

Attention has been drawn in previous annual reports to the need for an increased production of foodstuffs and to the efforts which the

Unit has made in this connection. Much of the work of rehabilitation is an agricultural problem and co-operation between the Agricultural Department and the Unit is essential and is taking place in an ever increasing degree. The work not only stimulates the planting of new varieties of vegetables but even the production of such well accepted foods as pumpkins, potatoes and beans shows a marked increase in those areas coming under the influence of the Unit. Once a stimulus has been provided the progress made by the people is not only dependent on the advice of the Unit but gathers a momentum of its own as a result of the people's awakened interest.

The Unit offered to assist the Department of Education with the school feeding scheme and as a result a combined school meal service was organised and is administered by a committee consisting of the head teachers of the schools with the medical officer in charge of the Unit as chairman. This committee meets once a month and discusses the past month's meals as well as plans for the future month. The medical officer buys the necessary food and the Department of Education has authorised the building of a communal store-room at the Unit's headquarters to store food for all schools within the combined service.

The numbers attending at the various clinics continue to increase. In connection with venereal disease, the average number of attendances per case has also increased. Enquiries made regarding the source of infection in venereal disease showed that the majority of the men, whether single or married, were infected while they were away from their homes either working in towns or for farmers. The majority of women were infected at their homes by their husbands who had recently returned from work in the towns. In the women only a small proportion of cases were due to adultery.

The Unit has continued to encourage the use of pits for the making of compost and for the disposal of animal, household, and garden refuse. Surveys of water supplies continue and from the information gained, the control of water-borne disease will be facilitated. Protection of springs is advised but this work requires more skill than the majority of Natives in the area possess and the work will have to be done either by the Unit or some other responsible body.

#### *Transvaal.*

Attention was drawn in the last Annual Report to the establishment of the Second Health Unit at Bushbuckridge in the Pilgrims Rest district of the Eastern Transvaal. In developing this Unit those difficulties have been encountered which are to be expected in trying to inculcate new and progressive ideas into a conservative and simple people in whom tradition and custom are deeply ingrained. The task has therefore been an uphill and difficult one. Progress has, however, been made with the instruction of suitable Native Health Assistants at Bushbuckridge, and the posting of these men after training to strategic points in the area, where they can best exert their influence on their own people. The principle object of the Unit is the prevention of disease and the attainment of a better standard of living for the Native people through instruction in matters of simple hygiene and dietetics. Emphasis is laid on the need for the Natives to help themselves to attain better conditions and better health by growing suitable fruits and other crops for their own consumption, and by improving the hygiene of their own homes. The work is of such a nature that it must obviously be some considerable time before much in the way of tangible results can be expected but there are indications that some of the Natives are beginning to appreciate the value of what is being taught them.

#### *Health Centres.*

Although the report of the National Health Services Commission had not been published by the end of the year under review, the Government had set aside a sum of £50,000 during the current financial year for the establishment of a number of health centres. A standing committee, on which the Department is represented by the Secretary, has been set up and given executive powers to proceed with the matter, and active steps are being taken to ensure that this development takes place along the most suitable lines. In establishing these centres it is obvious that particular attention must be paid to the health needs of the Native population.

#### 4. INFANT WELFARE.

Tables 29 and 30 show the infantile mortality rates for Europeans, Asiatics and Coloureds respectively. The European and Coloured rates have fallen again this year but the Asiatic rate has increased.

Among Europeans the infantile mortality rate was higher in urban than in rural areas, the rates being 50.50 and 40.83 per 1,000 respectively. The rate was higher amongst male than amongst female European infants, being 53.9 per 1,000 male births compared with 40.3 per 1,000 female births.

Of the 2,780 European infant deaths, 21.36 per cent. were due to diarrhoea and enteritis, 16.65 per cent. to broncho-pneumonia, and 16.33 per cent. to prematurity. These were the three main causes of death. 16.2 per cent. of the total European infant deaths occurred on the day of birth while 48.8 per cent. occurred within the first month.

There were 1,356 (1,192) stillbirths during the year; the rate may be given as either 22.55 (20.79) per 1,000 total births or as 23.07 (21.05) per 1,000 live births. Corresponding figures for last year are given in brackets. Both the number and the rate have increased this year. Stillbirths and early infant deaths are largely due to similar causes and the prevention of both lies mainly in improved nutrition of the expectant mother, increased and better ante-natal and mid-wifery services and prevention and treatment of venereal disease.

One course for non-European Health Visitors is being conducted in Johannesburg during 1944. During 1943, courses were conducted at Cape Town and Johannesburg. In Cape Town 10 candidates entered and 3 passed the examination. In Johannesburg 8 entered and 4 passed the examination the first time, 3 re-wrote and 2 of these were successful.

Thus a total of 9 non-Europeans qualified as Health Visitors during the year under review.



TABLE 29.—EUROPEAN INFANTS: BIRTHS AND DEATHS UNDER ONE YEAR REGISTERED AND INFANTILE MORTALITY RATE, I. DEATH RATE PER 1,000 LIVE BIRTHS, 1919-1943.

Year	Cape.			Natal.			Transvaal.			Orange Free State.			Union.		
	Total European Births Registered.	Deaths of European Children under One Year.	Death-rate per 1,000 Births.	Total European Births Registered.	Deaths of European Children under One Year.	Death-rate per 1,000 Births.	Total European Births Registered.	Deaths of European Children under One Year.	Death-rate per 1,000 Births.	Total European Births Registered.	Deaths of European Children under One Year.	Death-rate per 1,000 Births.	Total European Births Registered.	Deaths of European Children under One Year.	Death-rate per 1,000 Births.
1919.....	16,749	1,351	80·66	2,910	191	65·64	15,338	1,326	86·45	4,727	382	80·81	39,724	3,250	81·8
1920.....	18,425	1,654	89·77	3,256	235	72·17	16,768	1,576	93·99	4,996	448	89·67	43,445	3,913	90·0
1921.....	18,062	1,382	76·51	3,370	203	60·24	16,582	1,374	82·86	5,288	379	71·67	43,302	3,238	77·0
1922.....	18,248	1,294	70·91	3,294	180	54·64	16,370	1,292	78·92	4,920	357	72·56	42,832	3,123	72·9
1923.....	18,296	1,353	73·95	3,229	197	61·01	15,619	1,261	80·74	5,037	328	65·12	42,181	3,139	74·4
1924.....	18,730	1,296	69·19	3,410	273	80·06	15,287	1,171	76·60	4,919	382	77·66	42,346	3,122	73·7
1925.....	18,366	1,343	73·12	3,509	206	58·71	16,348	1,059	64·78	5,188	361	69·58	43,411	2,969	68·3
1926.....	18,675	1,196	64·04	3,588	189	52·68	16,304	1,186	72·74	5,309	273	51·42	43,876	2,844	64·8
1927.....	18,537	1,293	69·75	3,435	166	48·32	17,050	1,359	79·71	5,325	314	58·97	44,347	3,132	70·6
1928.....	18,032	1,240	68·77	3,514	184	52·36	17,949	1,370	76·33	5,318	365	68·63	44,813	3,159	70·4
1929.....	19,008	1,169	61·50	3,650	177	48·49	18,227	1,342	73·63	5,334	280	52·49	46,219	2,968	64·2
1930.....	19,468	1,332	68·37	3,641	159	43·65	19,108	1,386	72·54	5,317	300	56·42	47,534	3,177	66·8
1931.....	19,180	1,182	61·63	3,538	162	45·79	18,733	1,267	67·65	4,975	317	63·72	46,423	2,928	64·0
1932.....	18,284	1,205	65·90	3,373	204	60·48	18,376	1,402	76·30	4,911	271	55·18	44,944	3,082	68·5
1933.....	17,931	995	54·49	3,441	166	48·24	18,452	1,266	68·61	4,695	299	63·68	44,519	2,716	61·0
1934.....	17,642	1,022	57·93	3,310	157	47·43	19,327	1,279	66·18	4,599	270	58·71	44,878	2,728	60·7
1935.....	18,242	1,016	55·70	3,441	167	48·53	21,109	1,537	72·81	4,925	277	56·24	47,717	2,997	62·8
1936.....	18,162	980	53·96	3,606	189	52·41	22,192	1,454	65·52	4,670	249	53·32	48,630	2,872	59·0
1937.....	18,404	1,012	54·99	3,766	175	46·47	23,814	1,439	60·43	4,894	252	51·49	50,878	2,878	56·5
1938.....	18,727	962	51·37	3,886	193	49·67	24,568	1,322	53·81	4,884	214	43·82	52,065	2,691	51·6
1939.....	19,022	984	51·73	4,056	151	37·23	25,795	1,304	50·55	4,644	209	45·00	53,517	2,648	49·4
1940.....	19,091	872	45·68	4,218	224	53·11	26,383	1,431	54·24	4,747	198	41·71	54,439	2,725	50·0
1941.....	19,026	884	46·46	4,361	180	41·27	26,711	1,481	55·74	4,471	226	50·55	54,569	2,779	50·9
1942.....	19,422	958	49·38	4,445	202	45·44	27,615	1,298	47·00	4,661	212	45·48	56,143	2,670	47·5
1943.....	20,169	921	45·66	4,802	199	41·44	28,937	1,448	50·40	4,857	212	43·65	58,765	2,780	47·3

TABLE 30.—INFANTILE MORTALITY: ASIATICS AND MIXED, 1943.

Province.	Asiatics.			Mixed and other Coloured.		
	Live Births.	Infantile Deaths.	Rate per 1,000 Births.	Live Births.	Infantile Deaths.	Rate per 1,000 Births.
Cape.....	407	33	81·08	34,595	5,424	156·79
Natal.....	8,875	835	94·08	887	123	138·67
Transvaal.....	1,610	186	115·53	1,936	274	141·53
Orange Free State..	1	1	*	279	57	204·30
UNION.....	10,893	1,055	95·93	37,697	5,878	153·27

\* As only 1 birth and 1 death occurred in the Orange Free State during 1943, it will be misleading to calculate a rate for the infant who died may not be same as the child born.

5. MATERNAL WELFARE.

Tables 31 and 32 show the European, Asiatic and Coloured maternal mortality rates compared with previous years. There has been a slight fall in the maternal mortality rate amongst Asiatics this year. There

TABLE 31.—MATERNAL MORTALITY: EUROPEANS.

Year.	Live Births Registered.	Deaths due to Puerperal Causes.				
		Number.		Rates per 1,000 Live Births.		
		Puerperal Sepsis.	Other Puerperal Causes.	Puerperal Sepsis.	Other Puerperal Causes.	Total Puerperal Mortality.
1926...	43,876	88	112	2·06	2·50	4·56
1927...	44,347	101	112	2·28	2·53	4·81
1928...	44,809	102	121	2·28	2·70	4·98
1929...	46,219	140	103	3·03	2·23	5·25
1930...	47,536	119	131	2·50	2·76	5·26
1931...	46,423	116	102	2·50	2·20	4·70
1932...	44,944	126	113	2·80	2·51	5·31
1933...	44,519	113	101	2·54	2·27	4·81
1934...	44,878	121	148	2·69	3·30	5·99
1935...	47,717	119	107	2·49	2·24	4·73
1936...	48,630	116	132	2·39	2·71	5·10
1937...	50,878	99	124	1·94	2·44	4·38
1938...	52,065	78	114	1·50	2·19	3·69
1939...	53,517	69	124	1·29	2·32	3·61
1940...	54,439	67	116	1·23	2·13	3·36
1941...	54,569	46	90	0·84	1·65	2·49
1942...	56,143	60	99	1·07	1·76	2·83
1943...	58,765	45	122	0·77	2·08	2·85

are still far too many maternal deaths among both Asiatics and Coloureds, due no doubt to malnutrition and unhygienic living conditions—the result of poverty and ignorance, and also to lack of satisfactory maternity services. Improved midwifery services cannot be established until more trained staff are available.

Indian women in South Africa have as yet not availed themselves to any extent of the opportunities afforded to enable them to qualify as midwives, and Indian mothers have been almost entirely dependent on other races for skilled care during childbirth. It is time that Indian women took up this work in order to serve their community.

A number of Coloured midwives have already qualified at the training schools in the Cape, but increased training facilities must be provided if the demands are to be met.

Of 58,765 (56,143) European births, 23,201 (20,131) or 39·6 per cent (35·9 per cent.) took place in institutions. Corresponding figures for 1943 are shown in brackets.

The number of areas prescribed in terms of section thirty-nine (b) of Act No. 13 of 1928 remains at 5. The Midwifery Regulations were applied to the Divisional Council area of Stellenbosch during the year.

TABLE 32.—MATERNAL MORTALITY: ASIATICS AND MIXED—UNION.

Year.	Live Births Registered.	Deaths due to Puerperal Causes.				
		Number.		Rates per 1,000 Live Births.		
		Puerperal Sepsis.	Other Puerperal Causes.	Puerperal Sepsis.	Other Puerperal Causes.	Total Puerperal Mortality.
ASIATICS.						
1940...	9,531	16	37	1·68	3·88	5·56
1941...	9,841	16	44	1·63	4·47	6·10
1942...	10,262	26	40	2·53	3·90	6·43
1943...	10,893	26	40	2·39	3·67	6·06
MIXED AND OTHER COLOURED.						
1940...	38,366	81	129	2·11	3·36	5·47
1941...	38,412	88	121	2·29	3·15	5·44
1942...	36,631	57	111	1·56	3·03	4·59
1943...	37,697	64	128	1·70	3·40	5·10



TABLE 33.—EUROPEAN DEATHS FROM PUERPERAL CAUSES BY AGE GROUPS.

Causes.	1942.								1943.							
	All Ages.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and Over.	All Ages.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and Over.
<i>Post Abortive Infection.</i>																
Spontaneous, Therapeutic or of Unspecified Origin.....	12	1	5	2	2	2	—	—	13	1	4	1	1	4	2	—
Abortion induced for reasons other than Therapeutic.....	6	1	1	3	—	—	1	—	4	—	2	1	1	—	—	—
<i>Abortion without mention of Septic Condition.</i>																
Spontaneous, Therapeutic or of Unspecified Origin.....	4	—	—	3	—	1	—	—	8	2	—	2	3	1	—	—
Abortion induced for reasons other than Therapeutic.....	2	—	1	—	—	1	—	—	2	—	—	1	—	1	—	—
Styptic gestation.....	7	—	1	1	1	3	1	—	11	—	—	3	4	—	4	—
<i>Haemorrhage and Diseases of Pregnancy.</i>																
Haemorrhage from Placenta Praevia.....	1	—	—	—	—	1	—	—	2	—	—	1	—	1	—	—
Haemorrhage from Premature separation of Placenta and other accidental haemorrhage (except Abortion).....	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
Other and unspecified haemorrhage.....	3	—	—	1	1	1	—	—	3	—	1	1	1	—	—	—
Eclampsia.....	11	—	2	3	3	3	—	—	15	1	4	2	3	5	—	—
Albuminuria and Nephritis.....	2	—	—	1	—	1	—	—	4	2	—	1	—	—	1	—
Acute Yellow Atrophy of the Liver.....	1	—	1	—	—	—	—	—	1	—	—	—	—	1	—	—
Other Toxaemias.....	5	—	1	1	2	1	—	—	6	—	1	1	2	1	1	—
Other diseases and accidents.....	3	—	—	1	—	1	—	1	3	1	1	—	1	—	—	—
<i>Haemorrhage and Diseases of Childbirth and the Puerperium.</i>																
Haemorrhage from Placenta Praevia.....	—	—	—	—	—	—	—	—	4	—	—	—	3	1	—	—
Haemorrhage from Premature separation of Placenta.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other haemorrhages during childbirth.....	1	—	—	1	—	—	—	—	2	—	—	1	1	—	—	—
Other haemorrhages after childbirth.....	20	2	2	8	5	2	1	—	14	1	—	5	3	4	—	1
General or local puerperal infection (including puerperal tetanus) with or without mention of Pyelitis.....	36	5	4	5	8	7	6	1	21	1	6	1	4	4	4	1
Thrombo Phlebitis.....	2	—	—	—	1	1	—	—	2	—	—	—	1	1	—	—
Embolism and sudden death.....	4	—	—	1	1	1	—	1	5	—	—	1	3	1	—	—
Eclampsia.....	4	1	2	1	—	—	—	—	8	1	1	1	3	1	1	—
Albuminuria and Nephritis.....	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Acute Yellow Atrophy of the Liver.....	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—
Other Toxaemias.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Accidents.....	26	1	1	7	7	4	6	—	32	—	4	6	11	7	3	1
Other or unspecified diseases.....	7	—	—	1	2	1	2	1	6	—	—	1	3	1	1	—
<b>TOTAL.....</b>	<b>159</b>	<b>11</b>	<b>21</b>	<b>41</b>	<b>33</b>	<b>32</b>	<b>17</b>	<b>4</b>	<b>167</b>	<b>10</b>	<b>24</b>	<b>30</b>	<b>40</b>	<b>34</b>	<b>17</b>	<b>3</b>

## NURSING AND MATERNITY HOMES.

Tables 34 to 37 show the number of nursing and maternity homes registered with the Department, the accommodation in these homes, the number of staff employed and the number of inspections carried out. The number of homes remains almost the same as last year. The number of inspections carried out by the departmental officers is considerably less this year than last, partly due to the fact that one of the nurse-lecturers resigned in February and has not yet been replaced.

During the year 36 new nursing and maternity homes were registered and all except two of these had properly qualified persons in charge. These two were both maternity homes. One was registered with an unqualified person in charge on the understanding that all confinements would be conducted by medical practitioners or qualified midwives. The other has a registered medical and surgical nurse in charge.

Further improvements have occurred in regard to the qualifications of persons in charge of nursing and maternity homes as follows:—

- (i) There are 13 maternity homes run by unregistered persons, 3 of these admit general cases also. In 1943 there were 15 homes so run of which 5 admitted general cases.

- (ii) There are 17 nursing homes, to which general cases are admitted, in charge of midwives. In 1943 there were 28 such.
- (iii) There are 9 nursing homes to which maternity cases are admitted, run by registered nurses who have no midwifery certificate. In 1943 there were 12 such.
- (iv) There are 12 nursing and maternity homes in charge of resident medical practitioners and not all of these have suitably qualified nurses on their staff.

Ten of the above 51 nursing and maternity homes are mission hospitals. Such hospitals are not, of course, all registered with the Department, and it is probable that unsatisfactory staffing conditions also exist in some of those which are not so registered.

TABLE 35.—NURSING HOMES REGISTERED WITH THE DEPARTMENT.

Year.	Cape.	Transvaal.	Natal.	Orange Free State.	Total.
As at 30/6/1929...	104	90	43	26	263
As at 30/6/1930...	124	91	54	29	298
As at 30/6/1931...	110	98	51	25	284
As at 30/6/1932...	95	94	44	26	259
As at 30/6/1933...	105	100	46	25	276
As at 30/6/1934...	115	103	43	28	289
As at 30/6/1935...	126	128	42	28	324
As at 30/6/1936...	120	116	46	34	316
As at 30/6/1937...	134	120	49	35	338
As at 30/6/1938...	140	126	55	55	376
As at 30/6/1939...	147	124	61	48	380
As at 30/6/1940...	146	125	62	52	385
As at 30/6/1941...	145	123	60	53	381
As at 30/6/1942...	140	123	57	45	365
As at 30/6/1943...	146	119	55	53	373
As at 30/6/1944...	146	118	49	57	370

TABLE 34.—NURSING AND MATERNITY HOMES INSPECTED DURING THE YEARS ENDED 30TH JUNE, 1939, 1940, 1941, 1942, 1943 AND 1944, RESPECTIVELY.

Place	INSPECTIONS.											
	By Officers of Local Authority.						By Departmental Officers.					
	1939	1940	1941	1942	1943	1944	1939	1940	1941	1942	1943	1944
<i>Cape Province.</i>												
Cape Town.....	27	22	23	28	23	16	—	—	—	—	34	2
East London.....	7	4	8	6	6	11	—	2	3	—	3	6
Port Elizabeth.....	5	4	5	5	4	6	—	—	—	—	—	—
Elsewhere.....	—	1	2	1	—	1	73	57	65	47	38	42
<i>Natal Province.</i>												
Durban.....	17	11	16	12	10	—	—	—	—	—	—	—
Pietermaritzburg..	—	—	2	2	6	3	—	—	—	—	2	—
Elsewhere.....	—	—	—	—	11	—	15	15	27	16	19	10
<i>Transvaal Province.</i>												
Johannesburg.....	36	28	27	6	33	28	—	—	—	—	—	—
Other Rand L.A.'s	6	14	10	12	7	7	—	—	—	6	3	—
Pretoria.....	5	7	7	3	5	6	—	1	2	3	6	6
Elsewhere.....	—	1	—	—	—	—	40	34	28	39	39	7
<i>Orange Free State.</i>												
Bloemfontein.....	—	—	—	—	—	—	4	4	—	3	3	1
Elsewhere.....	—	—	—	—	2	—	36	19	26	24	34	14
<b>UNION.....</b>	<b>103</b>	<b>92</b>	<b>100</b>	<b>75</b>	<b>107</b>	<b>78</b>	<b>168</b>	<b>132</b>	<b>151</b>	<b>138</b>	<b>181</b>	<b>88</b>

TABLE 36.—BED ACCOMMODATION AVAILABLE IN NURSING HOMES.

Province.	1941.		1942.		1943.		1944.	
	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.	Euro-pean.	Non-Euro-pean.
Cape.....	1,327	221	1,307	318	1,319	432	1,288	544
Transvaal.....	1,569	197	1,632	222	1,495	301	1,500	319
Natal.....	982	924	696	990	773	907	851	809
Orange Free State..	223	13	232	19	250	13	261	14
<b>TOTAL.....</b>	<b>4,101</b>	<b>1,355</b>	<b>3,867</b>	<b>1,549</b>	<b>3,837</b>	<b>1,653</b>	<b>3,900</b>	<b>1,686</b>



TABLE 37.—PERSONNEL OF NURSING HOMES.

Province.	European.		Non-European.	
	Qualified.	Unqualified.	Qualified.	Unqualified.
Cape.....	350	226	9	99
Transvaal.....	438	304	13	96
Natal.....	190	128	28	187
Orange Free State.....	73	31	1	2
TOTALS.....	1,051	689	51	334

7. DISTRICT NURSING SERVICES.

Table 38 indicates the actual number of nurses and midwives employed at 30th June, 1944, in services subsidised in terms of Act No. 57 of 1935. The number of Europeans employed was less than last year but the number of non-Europeans employed has increased. The demand for both European and non-European nurses is far greater than the supply as is emphasised by the fact that although the number of posts approved at 30th June, 1944, was 665 the number actually filled was only 533. During the year 185 centre were visited in connection with nursing and maternity services.

TABLE 38.—DISTRICT NURSING SERVICE: NURSES, MIDWIVES AND NON-EUROPEAN NURSING ASSISTANTS AS AT 30TH JUNE, 1944 IN RESPECT OF WHOM SUBSIDIES OR PART-REFUND OF SALARIES ARE PAID, COMPARED WITH THE TOTALS AS AT 31ST DECEMBER, 1935.

Race.	Part-refunds under section 14 (a).		Subsidies under section 14 (b).		Part-refunds under section 15 (a).		Subsidies under section 15 (b).		Part-refunds to Provincial Administrations under section 13.	
	1935.	1944.	1935.	1944.	1935.	1944.	1935.	1944.	1935.	1944.
European.....	23	92	7	55	—	10	—	—	—	114
Native.....	2	9	—	—	11	95	3	99	—	18
Coloured.....	—	10	1	5	—	—	—	—	—	26
ALL RACES.....	25	111	8	60	11	105	3	99	—	158

8. GENERAL HOSPITALS.

The system of advising the Provincial Administrations on hospital matters has been continued. Owing to the abnormal times and the consequent acute shortage of professional officers, it was not practicable to carry out routine inspections of the hospitals under the jurisdiction of Provincial Administrations as was done formerly. The Department in consultation with the Department of Public Works nevertheless was able to advise Provincial Administrations on new hospital schemes or extensions to existing hospitals. In spite of many war-time difficulties, hospital boards have, generally speaking, made every effort to meet the shortage of general hospital accommodation in the Union.

In the Cape Province a scheme for an entirely new hospital at Butterworth was commenced and the plans have reached a satisfactory stage, while at Port Elizabeth the plans for an entirely new non-European hospital, quite separate from the European hospital, has made considerable progress.

In the Orange Free State no additional hospital accommodation has been provided, the Administration taking the view that the hospital needs of the province are at present met.

In the Natal Province no additional accommodation has been provided and, as far as is known, the proposal to provide a new hospital for Europeans in Durban is still under consideration.

In the Transvaal Province the erection of a new hospital at Potchefstroom is in progress, while a scheme for a new hospital at Vereeniging is also under consideration.

9. DENTAL SURVEY.

The results of the investigations in connection with dental caries which were carried out by the Dental Health Officer are published in detail in his "Report on the Incidence of Dental Caries Among School Children in South Africa", in which the various aspects of the matter are fully discussed. In his survey the Dental Health Officer examined 78,563 European school children for caries in different parts of South Africa and of this number he found that 67,063, or 85 per cent., had at the time of examination or had at some previous time suffered from one or more carious teeth. Of the same number, 56,312, or 72 per cent., were actually in need of dental attention at the time of examination. On this basis it was estimated that of 391,056 school children in South Africa approximately 334,484 suffer or have suffered from dental decay at some time in their lives and approximately 280,638 are in need of dental attention.

The incidence of dental caries was found to be highest in the southern and south-western coastal areas of the Cape Province and in the Natal coastal districts, while it was lowest in the north-western Cape Province and the northern Transvaal. The incidence was higher among the children of the urban areas, where 93 per cent. were found to be affected, than among those of the rural areas, where the figure was 79 per cent., and it is probable that the higher consumption of refined foods such as sweets, cakes and biscuits by children in the towns is an important factor. It was also found that the incidence was higher among school children of the lower age groups. It is possible that the deciduous teeth are more susceptible to dental caries than are the permanent teeth and there is also the fact that the deciduous teeth in young school children have been exposed to the risk of dental caries for a longer period than the permanent teeth in slightly older children. The influence

of these two factors is difficult to assess without a very detailed investigation but the possibility that dental caries is actually increasing rapidly, presumably due to change of food habits, must not be lost sight of.

The incidence of dental caries is considerably lower, only 28 per cent among children whose teeth were mottled, due to fluorine in the water supply, than among those children with no mottling, in whom it was nearly 87 per cent. Similarly, it was very much lower among children living in the endemic fluorosis areas, where it was 40 per cent., than in those areas where the drinking water contains less than one part per million of fluorine, where the incidence of dental caries was 90 per cent. or more. It has previously been indicated, however, that although a moderate excess of fluorine in the water is beneficial to the teeth, marked excess of fluorine on the other hand leads to hypoplasia of the teeth which predisposes to dental caries.

Children who habitually drink "hard water, which contains large amounts of lime, have better teeth than those who drink "soft water.

From this survey it appears that the diet is the most important contributory causal factor. The greatest number of children who are free from caries was found in those areas where the carbohydrate intake is low and the diet consists chiefly of whole-meal bread and meat. The greatest number of children with carious mouths on the other hand was found in those areas where the carbohydrate intake is very high and the diet consists mostly of bread, rice, sweet-potatoes and very little or no meat.

From these facts it is clear that the prevention of dental caries depends to a large extent on improved dietetic habits with a greater consumption of meat, whole-meal bread, dairy products, eggs, vegetables and fruit and a reduction in the consumption of carbohydrate foods, especially the refined cereals, rice, sweet-potatoes, cakes, sweets and biscuits. An increase in the fluorine and calcium intake in the diet in those areas where these substances are deficient would improve the position. More attention to oral hygiene is also required by correct brushing of teeth after meals, rinsing, and the eating of hard, coarse, fibrous foods which assists in keeping the mouth clean and reducing the activities and growth of the destructive oral flora.

If this great problem of dental caries is to be adequately dealt with, it will obviously be necessary not only to improve the diet of a large proportion of the population but also to provide organized dental services for those people who cannot afford to pay for their own dental attention as the dental services at present provided for indigent school children are very limited. Great expansion in these services including the employment of many full-time dentists of whom the majority should be itinerant, would be required to deal adequately with the problem.

10. THE SOUTH AFRICAN MEDICAL COUNCIL.

In terms of the Medical, Dental and Pharmacy Act, a special meeting of the Council was held in January, 1944, to elect office bearers and committees of the new Council which came into existence on the 1st January, 1944.

The following table indicates the number of registrations and restorations effected during the year :—

	Registrations.	Restorations.
Medical Practitioners.....	223	25
Dentists.....	11	5
Medical Students.....	431	—
Dental Students.....	42	—
Nurses.....	781	115
Midwives.....	512	87
Masseurs.....	12	2

As in previous years the number of nurses coming into the Union from overseas has shown a decline. Only 47 such nurses were registered, 34 of whom came from Great Britain, the others came from Australia, Canada, Southern Rhodesia, etc. Twenty midwives were registered by virtue of qualifications obtained in overseas countries, principally in Great Britain.

The following tables show the numbers of persons whose names appeared in the various registers on the 30th June, 1944 :—

Medical Practitioners.....	3,932
Dentists.....	746
Medical Students.....	1,704
Dental Students.....	100
Nurses.....	8,801
Midwives.....	5,958
Masseurs.....	110
Dental Mechanics.....	121

The Council still continues to receive a number of applications for registration as specialists. These applications are considered by a special committee of the Council, whereafter the applications are



referred to the executive committee for final consideration. The Council is considering whether it should not tighten up the requirements for registration as specialists, and it has consulted the universities for their views, and with a view to those institutions introducing suitable courses so that persons can qualify for registration in South Africa.

Numbers of complaints against registered persons still continue to be received. During the year six formal enquiries were held: four into the conduct of medical practitioners, one into the conduct of a dentist, and one into the conduct of a midwife. One of the medical practitioners and one of the dentists concerned were erased from the registers under the Council's disciplinary powers. One medical practitioner was suspended from practice for one month, and two were cautioned. The midwife was cautioned. Numerous other complaints were investigated and in most cases they were settled by the executive committee of the Council to the satisfaction of all parties concerned without the necessity of holding a formal enquiry.

A faculty of medicine has been established by the University of Pretoria and there are now three universities which train students for qualification as medical practitioners. Thus far there is only one school of dentistry, viz. at the University of the Witwatersrand, but the Council has made representations to the Minister to investigate the possibilities of establishing a school of dentistry at the University of Cape Town.

The Council still devotes a considerable amount of time to nursing and midwifery matters. During the year it recognised three new training schools for nurses; two were raised from class II to class I training schools; one hospital was recognised as a training school for fever nurses and one additional hospital as a training school for midwives.

The Nursing Act was passed during the 1944 session of Parliament. Under that Act the functions of the Medical Council in regard to nurses and midwives will cease on a date to be fixed by the Minister by proclamation in the Gazette. After that date and the establishment of the South African Nursing Council, all matters relating to nurses and midwives will fall under the jurisdiction of the Nursing Council.

An act to amend the Medical, Dental and Pharmacy Act was passed by Parliament at the 1944 session. Under the amended act the representation of dentists on the Council has been increased so that each Province can be represented by one dentist. The Government still continues to appoint one and the University of the Witwatersrand has been given authority to appoint one dentist as a member of the Council.

A bill to provide for the registration of dental mechanics was introduced in 1944 but did not reach the statute book. The Council has urged the Government to proceed with the bill and it is hoped that it will do so at an early date.

#### 1. THE SOUTH AFRICAN PHARMACY BOARD.

During the period under review 55 chemists and druggists, 32 managing directors of companies carrying on the business of chemists and druggists, and 111 apprentices were registered. On the 30th June, 1944, the names of 1,614 chemists and druggists, 155 managing directors, and 334 apprentices appeared in the Board's registers.

The Board continues to receive complaints of unprofessional conduct on the part of registered chemists and druggists, and it was necessary on two occasions to hold formal enquiries. In both cases the accused were found guilty. One chemist and druggist was cautioned and reprimanded and the other was cautioned.

During the year under review the Board jointly with the South African Medical Council published a South African Pharmaceutical Formulary to overcome the difficulties which chemists and druggists were experiencing in dispensing medicines owing to the shortage of certain drugs. The Formulary has proved of considerable value and it is hoped that it may be the forerunner of a South African Pharmacopoeia in due course.

Elections for members of the Board were held towards the end of 1943. All the candidates who were members of the previous Board were re-elected except one who did not seek re-election. In that case a new member was duly elected.

#### 12. ADMINISTRATION OF THE MEDICAL, DENTAL AND PHARMACY ACT, No. 13 OF 1928.

##### *Habit-forming Drugs.*

TABLE 39.—PROSECUTION AND CONVICTION UNDER LAWS RELATING TO HABIT-FORMING DRUGS DURING THE YEAR ENDED 30TH JUNE, 1944.

Province.	European.		Native.		Asiatic.		Other Coloured.		Total.	
	Prosecutions.	Convictions.	Prosecutions.	Convictions.	Prosecutions.	Convictions.	Prosecutions.	Convictions.	Prosecutions.	Convictions.
Cape.....	45	41	982	920	11	11	1,188	1,150	2,226	2,122
Natal.....	31	27	3,727	3,621	160	159	168	161	4,086	3,968
Transvaal.....	82	69	4,555	4,365	17	16	326	301	4,980	4,751
Orange Free State	7	7	396	388	—	—	28	28	431	423
UNION.....	165	144	9,660	9,294	188	186	1,710	1,640	11,723	11,264

The total number of prosecutions in the Union amounted to 11,723 of which 11,694 were in respect of dagga and 29 on account of other habit-forming drugs. Large quantities of dagga were seized and destroyed by burning. The amounts of opium and other narcotic drugs

confiscated were larger than previously. The amounts so obtained were disposed of by informal tender to firms of chemists and druggists for manufacturing purposes.

The following quantities of narcotic drugs were imported into the Union during the year ended the 30th June, 1944:—

Raw opium, 1,182 lb.; medicinal opium, 56 $\frac{3}{4}$  lb.; opium in the form of tinctures and extracts, 62 $\frac{3}{4}$  lb.; Indian hemp in the form of extract, 50 lb.; morphine, 304 lb.; diacetylmorphine, 42 $\frac{3}{4}$  lb.; and cocaine, 35 lb.

The quantities of narcotic exported to the adjoining territories during the period under review were:—

Medicinal opium,  $\frac{1}{2}$  lb.; opium in the form of extracts and tinctures, 21 $\frac{3}{4}$  lb.; Indian hemp in the form of extract, 1 lb.; morphine,  $\frac{1}{2}$  lb.; diacetylmorphine, 1 $\frac{1}{4}$  oz.; and cocaine, 12 oz.

The importation of certain essential drugs shows an increase over the previous year. A portion of these stocks is held in reserve to meet the demand in the event of delay in receiving additional supplies.

##### *Poisons.*

Numerous prosecutions have been instituted against general dealers who continue to contravene the provisions of Act No. 13 of 1928 in regard to the keeping and sale of poisons. Departmental inspectors have advised and warned first offenders, and generally, have been of assistance in ensuring that the provisions of the law are clearly understood.

The Fourth Schedule to the Medical, Dental and Pharmacy Act, No. 13 of 1928, was amended during the year as follows:—

To be added to Division II:—

Thyroid gland (dry Thyroid, Thyroid extract).

The active principles of Thyroid gland and their derivatives. Paraldehyde.

#### 13. ADMINISTRATION OF THE FOOD, DRUGS AND DISINFECTANTS ACT, No. 13 OF 1929.

An important step has been taken by the Department towards safeguarding the public against exploitation by manufacturers of foodstuffs, who describe their products as vitaminised, by the promulgation of the following amendment to Regulation No. 2 (4), in terms of Government Notice No. 805, dated the 19th May, 1944:—

“Nor shall any such label bear the word ‘vitaminised’ or ‘vitamin-fortified’ or any word or words which might be construed as indicating that any vitamin or vitamins has or have been added to such article of food, whether added or produced by any physical or chemical process, unless the nature of and quantity in units per gram or c.c. of such vitamin or vitamins is stated thereon in the same type face measurements as the word ‘vitaminised’ or ‘vitamin-fortified’ or such word or words is printed on such label.”

TABLE 40.—SAMPLES TAKEN FOR EXAMINATION OR ANALYSIS UNDER ACT No. 13 OF 1929, DURING THE YEAR ENDED 30TH JUNE, 1944 AND THE RESULTS.

Place.	Total Taken.	Number Analysed or Examined.	Number Found Adulterated or Incorrectly or Falsely Described.	Prosecutions.	Convictions.
Ports of the Union.....	92	92	6	—	—
Cape Province.....	1,408	1,398	302	145	116
Natal Province.....	475	475	54	38	38
Transvaal Province.....	2,368	2,367	600	232	183
Orange Free State Province.....	269	269	13	10	8
TOTAL.....	4,612	4,601	975	425	345

#### 14. NUTRITION AND DIETETICS.

##### *National Nutrition Council.*

As a result of a review of its machinery, the National Nutrition Council has met more frequently during the past year, particularly the Executive Committee, which acts on behalf of the Council. The Council itself will in future meet only about twice a year. Several meetings of the Research, Agriculture and Economics, and Education and Propaganda Committees were also held. A meeting of the non-statutory Parliamentary Advisory Committee on Nutrition was also held during the 1944 Session of Parliament.

The Council has decided to submit reports at regular intervals to the Minister and the first was issued in January, 1944 (No. U.G. 13, 1944) in respect of the period 27th June, 1940 (date of establishment) to 31st December, 1943. Further reports will be published from time to time.

Matters of particular interest dealt with in the first report on the Council's activities are:—

The functions of the newly established Nutrition Section within the Department;  
The recognition of human malnutrition;  
The various nutrition surveys and what they revealed;  
Education Publicity and Propaganda;  
Milk and Milk Products;  
Margarine;  
Bread;  
Maize;



Surplus Citrus ;  
Dehydrated Products ;  
Food Yeast ;  
Fish and Fish Liver Oils ;  
National School Feeding Scheme ;  
Rural Malnutrition ;  
Bantu Nutrition ; and  
The Future Programme of the Council.

In view of the expanding activities of the Council and the Nutrition Section, several additional posts have been created on the establishment of the Section which will bring the personnel to—

2 Nutritionists.  
1 Economist.  
7 Dietitians.  
4 Clerical Officers.

It is the Council's proposal, as soon as the extra officers have assumed duty, to carry out further nutrition and economic surveys, and a nutrition education campaign among all races in the Union. For this purpose the Section has drafted a number of pamphlets which will be distributed to the general public. Enquiries for these publications should be addressed to the Secretary, National Nutrition Council, P.O. Box 386, Pretoria.

During the year the Nutrition Officer also carried out a number of important inspections in various parts of the country and gave several lectures and talks to organisations on nutrition subjects.

#### *Dietitians.*

Of the three Dietitians on the staff of the Nutrition Section, the senior is still seconded to the Directorate-General of Medical Services, Department of Defence, while the remaining two are at head office. During the year the latter carried out several inspections of institutions and gave a number of lectures to private organisations. Due to pressure of office work, however, it has not been possible for them to carry out all the inspections requested or the amount of field work which requires attention. It is hoped, however, that with the appointment of the four additional dietitians contemplated, the position will be somewhat relieved.

#### 15. ALGAE POISONING.

In the last Annual Report the problem of algal growth in the Vaaldam, which caused poisoning of stock, was referred to, and it was mentioned that steps were being taken by the Department of Irrigation, in consultation with the Division of Veterinary Services, the Rand Water Board and this Department, for the eradication of the algae by means of copper sulphate. The treatment of the whole infested area of the dam, some 57 square miles in extent, was carried out systematically by means of motor-boats which towed sacks containing copper sulphate through the water. By this method, copper sulphate was dissolved in the waters of the dam in the proportion of 1 part in 4 million, a concentration which it had previously been found destroyed the algae but was not inimical to humans, fish or animals. These measures were entirely successful and resulted in the complete disappearance of the algae while the poisoning of stock by the waters of the dam ceased.

The matter has been kept under observation and discussed periodically by a committee on which the interested Departments as well as the Rand Water Board are represented. It has been found that this algal growth occurs in several other dams in different parts of the country, including the Hartebeestpoort, Loskop and Bon Accord dams, all of which are used for extensive irrigation schemes. It has also been found in a number of smaller private dams and especially in shallow pans, where it has given rise to poisoning of stock. The large dams forming part of the irrigation schemes have been treated with copper sulphate by the Department of Irrigation or, in the case of Bon Accord dam, by the Irrigation Board, and in each case the treatment has been entirely successful. It is found, however, that it is necessary to keep the dams under constant observation as the growth tends to recur, probably to some extent by reinfection of the water by overflow from small dams and pans in the catchment area. Advice and assistance has also been given by the Division of Veterinary Services to a large number of individual farmers regarding infestation of private dams and pans with this algae. In terms of the Weeds Act (Act No. 42 of 1937), the poisonous algae has been proclaimed a noxious weed in a large number of districts in the Transvaal and Orange Free State.

As indicated in last year's report, the possibility of humans being affected was carefully considered and a warning was issued to the various district surgeons in the areas most seriously affected. A letter drawing the attention of medical practitioners to this possibility was published by the Secretary for Public Health in the *South African Medical Journal* of 8th January, 1944, while references have been made to the whole matter from time to time in the lay press. The problem was also brought to the attention of farmers by an article by Dr. D. G. Steyn of the Division of Veterinary Services entitled "Poisoning of Animals by Algae on Dams and Pans" which appeared in *Farming in South Africa* in July, 1943. No cases of human intoxication from this source have as yet been reported but, as the water from highly infected parts of the dam is so poisonous to animals, there is every reason to suppose that it would constitute a grave danger to human beings who might drink it. As regards the Rand Water Board, as previously mentioned, the degree of dilution of the water is so great that there is no danger of any harmful effects. The position is, however, being closely watched.

Arising out of this matter an interdepartmental committee has been appointed to enquire into and report upon the incidence throughout the Union of bacteriological and chemical pollution in water supplies used for domestic purposes including live stock in both urban and rural areas, and to submit recommendations for dealing therewith. This committee is under the chairmanship of the Deputy Chief Health Officer, Pretoria.

#### 16. MEAT SUPPLIES.

The meat control scheme was introduced during the year under review and the subject of meat supplies has received considerable prominence. It may therefore be of interest to refer to the numbers of animals slaughtered and the numbers rejected for "measles" and tuberculosis, the two most important individual causes of rejection of meat, which are reflected in the following table, compiled from the returns obtained annually by this Department from all local authorities including magistrates throughout the Union.

TABLE 41.—NUMBER OF ANIMALS SLAUGHTERED AT ABATTOIRS AND CONDEMNED BY LOCAL AUTHORITIES IN THE UNION ON ACCOUNT OF MEASLES AND TUBERCULOSIS DURING THE YEAR ENDED 30th JUNE 1944.

	Number Slaughtered.	Number Condemned (Tuberculosis).	Number Condemned (Measles).
Swine.....	173,466	389 (.22%)	6,368 (3.67%)
Bovines.....	505,510	454 (.09%)	3,506 (0.69%)
TOTAL.....	678,976	843 (.12%)	9,874 (1.46%)

It is of interest to note that the number of animals condemned for "measles", and the amount of food which thus has to be wasted, is very considerable in the aggregate. The Department has for years stressed the necessity for the introduction of simple sanitary arrangements on farms as being the solution of this important problem. The prevailing lack of sanitary facilities, with the consequent pollution of pastures with human faeces which may contain ova of tapeworms, is the cause of this great loss of meat through infestation by "measles", the cystic stage of human tapeworm.

The question of abattoir control was fully discussed in the annual report for the year ended 30th June, 1941, when the Department's reasons for favouring a system of regional abattoirs were explained in some detail. It is of interest to note that the slaughtering of cattle at slaughter poles in the peri-urban areas of the Reef and other large towns assumed very considerable proportions, partly as a result of black market activity following the introduction of the meat control scheme. Since the end of the year under review, steps have been taken by the meat control organisation under emergency regulations to put an end to this slaughtering in the peri-urban areas, except under certain circumstances where exemptions are granted. Apart from other considerations, this is an important advance from a public health point of view as it means that in the larger towns and their environs the amount of meat consumed which is not slaughtered under municipal control and subject to municipal inspection must be considerably less than was formerly the case.

#### VII.—ACKNOWLEDGMENTS.

My thanks are due to all other Government Departments and their officials (especially Magistrates and Native Commissioners), the South African Railways and Harbours Administration, the four Provincial Administrations, and local authorities. The Departments of Native Affairs and Defence, and the Railways Administration were particularly helpful to the Department in its efforts to control the epidemic of typhus in the Transkeian and Ciskeian Territories during the year. Thanks are due also to the South African Institute for Medical Research, the South African Medical Council, the South African Pharmacy Board, and the Medical Association of South Africa.

Further, I wish to express my thanks to Dr. H. O. Hofmeyr of the Union Government Scientific Mission in Washington, and Col. P. G. Stock of the Ministry of Health, London, for their indefatigable work in the interests of the Department in the international sphere and for keeping the Department posted in regard to developments overseas in the field of public health and medicine.

Finally, I should like to express my appreciation of the loyal and efficient manner in which the staff of the Department has carried out its duties during a very difficult year. In particular, I should like to thank Dr. B. M. Clark, Senior Assistant Health Officer, for sub-editing this report.

I have the honour to be,

Sir,

Your obedient Servant,

PETER ALLAN,  
*Secretary for Public Health.*

Pretoria,

19th December, 1944.







